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THE PASSING OF THE FAMILY PHYSICIAN.

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IT may be well to pause in our headlong pursuit of science and of knowledge to see where we are now standing. A condition and not a theory confronts us, and whether it pleases us or not has nothing to do with the case. An examination of the past and present status of the medical profession will reveal many changes.

Only one or two generations ago the physician and the minister were consulted in all family affairs; they were ever honored and welcome guests, and they were everywhere powers for good. Even the family circle was incomplete without them. Whether the minister retains his old proud position or not is foreign to the subject of this paper, as it deals only with the family physician. Ian MacLaren's "Weelium MacLure" was not an ideal person, but was the prototype of the beloved family physician, who not only at birth and death, but all through life, in sickness or in health, in poverty or in wealth, was the one upon whom all relied for sympathy and for help. He was loved and honored to a degree now unknown, and his influence for good was great and far-reaching. The family physician was consulted for all ailments, great and small. He knew the families, their modes of life, their peculiarities and idiosyncrasies, and the perils to which they were exposed. His knowledge of the family was so thorough and complete that he almost intuitively realized the nature of the malady as soon as he heard who was sick. This thorough and intimate acquaintance with his patient, with the family and personal history, the surroundings and occupation, was of vast service to the family physician. All diseases and injuries came directly to him, and he cared for them faithfully and well. The case was completely in his hands, and it was left for him to call in the specialist when required. His wants were few, his fees were small, and were often honorariums, and he lived simply, loved and respected by all. He was a gentleman of the old school, a scholar of no mean ability; well-posted not only in medicine and surgery, but in his knowledge of the world and of nature, and most of all in his intimate knowledge of humanity.

In the Revolution, in framing our wonderful Constitution, in the halls of Congress, he was ever at the front, a leader of men. Our freedom, our wise laws, and our liberal government were in part due to his energy, his wisdom and his patriotism. The lawyers and the politicians did their part, but did not do it all, as they are at present so willing to do. He was not so absorbed in money making that he had no time to devote to forming a wise and enlightened public opinion. He had a powerful hold upon all classes and conditions of men, and for him all had a cordial welcome and sincere love and admiration. He was wonderfully fertile in resources, able and ready to meet all emergencies; yet most of all he was the loved and faithful friend, counsellor, companion and leader of the people. Unselfish to a rare degree, his tomb might well bear the motto: "Here lies one who loved his fellowmen." Too often he wore himself out in his labor of love, and the ironical jeers of the Jews to our Saviour on the cross could be well applied to the faithful old family physician, who so bravely followed in that Saviour's footsteps. "He saved others; himself he could not save." A noble heritage is ours, and only by expending our entire lives for humanity can we hope to become worthy sons of such fathers. How different the present state of affairs! The physician wants to be a specialist from the start. It will not do to wait for years of general practice, on whose broad structure he can build, but the colleges and post-graduate schools turn out specialists *pro re nata*.

He must be in style regarding clothes, office, residence, turnouts, etc., and must have his stenographer, his business manager or bill collector, and must press for monthly settlements of his dues.

The senior Dr. William Pepper, I think it was, never presented a bill or set a price upon his services, the honorariums were left to the generosity or gratitude of his patients. Such a course would now bankrupt us all, owing in part to the change in the public and in part to the change from the family physician to the up-to-date specialists.

If the latter's patients are unable to pay his necessarily high charges, he will care for them free of expense at the clinics or the hospitals, but not elsewhere. This tends to pauperize the poor or drive them to perhaps less skillful hands. The ever-growing habit of specialism leads the patients to diagnose their own case, and thus save a fee, or, at least, inclines them to go to a throat-specialist for tonsilitis, to a nose-specialist for coryza, to an oculist for conjunctivitis, to a neurologist for headaches, to an electrical expert for neuralgias, to a genito-urinary man for "pain in the kidneys," to an advertising quack for all chronic ailments (though even these advertisers are of late becoming specialists), and to a gynecologist for leucorrhoea.

Heretofore this multi-specialism has affected the family physician mainly, and surgical troubles usually went to the surgeon; but now the general surgeon is feeling the same evil which has so sorely tried the family physician. One patient leaves the surgeon to go to the genito-urinary surgeon, another to go to the gynecological surgeon, and all the specialties now have

their surgical experts, so the general surgeon bids fair to follow the general physician into "innocuous desuetude."

Has this change been for the good of the patient and for the relief of suffering humanity? Has the public at large been a substantial gainer? Has not the rush and hurry after wealth, fame, and position changed our beloved profession into a business, a legitimate and praiseworthy business, if you will, but none the less a business? If so, where will it end? It takes no prophet to foresee that if the present conditions increase, family physicians will become as extinct as the ichthyosaurus, and ere long suffering humanity will be treated by a syndicate of physicians. These various specialists, with their business manager, will have contiguous offices, and any one finding a case not in his line will promptly turn it over to the proper specialist. The manager will look after such details as the financial responsibility of the patient and the collection of the fees. In this syndicate will needs be one emergency man or diagnostician, who will take care of emergencies temporarily and will see that the patients go to the proper specialist. It may happen that a case will be treated the same day by an oculist, the aurist, the throat specialist, the lung, the uterine, the rectal and the electrical specialists, all of whom will do perhaps better work than could the family physician, but in such a case the syndicate fees would be appalling. Each member of the syndicate would treat the local conditions or organ belonging to his specialty, but his limited field of observation and treatment would not entitle him to be heard on the treatment of the body is general.

There has been a great increase in knowledge and no brain can hold all that is known about the human system in health and in disease, and a certain amount of specialism is just and necessary. It is nevertheless a fact that this great increase in the army of specialists, many of them just out of college, is apt to create one-sided men, men who are prone to magnify the importance of the organs of their specialty, and overlook other organs which may be equally at fault. We have all heard of the entomologist who devoted his life to the study of a certain beetle, and when dying he bemoaned the fact that he had taken such a large field of study. He said that if he had devoted his life to the study of the hind leg of that beetle he would then have mastered that subject, but he had taken such a broad field (thereby dissipating his powers) that he had accomplished comparatively little.

In these days of wonderful progress in medical and surgiclal education, all physicians must stand upon the same basis of knowledge at the time of graduation, and all must be fairly competent to practice medicine in all its branches. The old idea that a first-class, general education, followed by equally good college training, was necessary to fit one for general practice is still the rule and is more vigorously enforced than ever before. But that other rule, that it requires many years of general practice, with its careful study of the body in all its parts, both in health and disease, to enable one to become a successful specialist is now obsolete. This second rule was a safeguard, and kept in general practice all except the few who in after years showed an especial proficiency in certain branches, into which they drifted often, almost without their knowledge or consent.

Now the specialist's axiom is that physicians are mainly of use as diagnosticians, and their only function is to diagnose each case and send it to the proper specialist for treatment. If this rule is just and becomes the usual method of procedure, how long will such a physician be a reliable diagnostician if he does not follow out the history and treatment of his cases through all their various phases? The specialist cannot know the idiosyncracies, habits, or surroundings of his patients, and thus important points in successful treatment are lost. The so-called family physician, being only the diagnostician, will be incapable of furnishing the necessary data.

Formerly the title "Doctor of Medicine" was one of great dignity and value, and its legitimate possessor had reason to be proud of it. Now to be simply a doctor, and not a specialist, is to be considered of little value in the community. So true is this that family physicians, even in our small hamlets, often feel obliged to adopt some specialty.

This is not an overdrawn or fanciful sketch, and if the wise and otherwise (if such there be) members of this society will fully discuss this grave question, the purpose of this paper will be accomplished.

THE COUNTRY DOCTOR IN THE PRACTICE OF MEDICINE.

By W. T. Sarles, M.D., Sparta, Wis.

THE resources of the country doctor in the practice of medicine should be as ample as the fullness of the seas and as fertile as the lands of the earth. His courage and faith must be sufficient to remove mountains, and his gentleness that of the lamb. His life must be one of perpetual sacrifices, and his death that of the laborer of whom it is said, "Well done, thou good and faithful servant," etc. All this is desired and even required by his patients, but the law very sensibly enacts as follows:

"One practicing in a small town or sparsely settled country district is not to be expected to exercise the care and skill of one residing in, and having the opportunities afforded by, a large city. He is bound to exercise the average degree of skill possessed by the profession in such localities generally."

The ordinary and reasonable care, skill, and diligence which the law requires of physicians and surgeons is such as physicians and surgeons in the same general neighborhood in the same general line of practice ordinarily have, and exercise in like cases. So while the doctor has the ideal for his motto in theory, the law requires only a percentage of that ideal in his practice. The country doctor, having to treat the same mechanism of God's handiwork as does his city

brother specialist, merges almost daily into the surgical, gynecological, and a dozen or more branches of specialism with his numerous patients. And while he has the pride and disposition to treat them all as well as they could be treated under any other circumstances elsewhere, how can he be expected to do so, and who knows better than the doctor himself that he cannot? However, he can treat such patients equal to his skill and environment, and the question of when and how to better their condition is one often perplexing. Again the law says: "If a physician or surgeon is not competent, or feels that he is not competent, to treat a case, it is his duty to recommend the employment of another; but if he is competent and so considers himself, and is in doubt concerning the case, he should use his best judgment as to consultations with other physicians and surgeons. But the refusal to accept the assistance of another in the treatment of a case imposes no higher duty upon a physician or a surgeon." Thus it will be seen the law is not imperative, but leaves the acceptance or rejection of counsel or assistance entirely with the judgment of the physician or surgeon in charge of the case.

The doctor alone in the country, distant from surgical counsel, with a case of surgical appendicitis on his hands, is ever at a loss to give the best-known help to his patient, but is giving him the best practiced in his locality, and which is even better than that practiced by the specialist of ten or more years ago. The patient is destitute of modern coveniences or mode of living, owing to lack of means. The doctor, however, knowing his patient's needs, seeks surgical assistance even at his (the doctor's) own expense. The surgeon is called. The doctor settles the bill. The patient recovers. He thanks the doctor. Nothing more is expected.

The following year this dutiful patient aids another physician to get a start in this community (which now barely supports the man who has given all his time and money for the best medical services obtainable). This dutiful patient tells his friends that had this new young doctor been there when he had appendicitis he wouldn't have had to send away for a surgeon and thus spend his money. This all comes home to the faithful doctor. He wonders why he called his surgical friend out to operate; why he didn't let this patient die without operation, as they did ten years ago, and then he would not have had his enmity, would not have been out his time and money and would have done all the law required. This case may represent the exception rather than the rule, but the country doctor is not situated as is his city brother. He cannot exchange an eye case for one of appendicitis, nor a case of stone in the bladder for one of lacerated cervix uteri, as specialists may dictate in the city; but he must do the best he can with the knowledge and skill he possesses and the conveniences he has at hand. He cannot always do as Dr. Jonathan Hutchinson says of himself: "Acting on the rule of conduct that he would never keep a patient in his own hands if he believed some one else could do what was needed with greater prospect of success;" for it is often impossible to obtain that someone for lack of time or money, and one's self might save the life of his patient, though by somewhat unskilled means. When, however, should he call counsel? First, always when demanded by his patient, who is able to meet his demands; and, second, always when, in the judgment of the doctor, his patient or himself will be sufficiently benefited thereby, in both instances it being in the range of possibility. The country doctor is always open to counsel. His numerous cases and experiences lead him early to see the limitations of his healing powers, and he watches the laboratory and hospital clinical reports with keen observation, hoping for improved methods of treatment. How quickly the country doctor grasped the principles of asepsis and antisepsis, and of serum-therapy, especially as applied to diphtheria. This being the tendency of the country doctor's mind, to receive more than to impart the teachings of the laboratory and clinic, what is his first obligation to the clinical teacher and specialist as well as to his patient? It can be no more nor less than the furnishing of material, in the form of pathological specimens, and patients at his command which he cannot himself competently examine or treat, in the interest of science and of his patient. He can thereby assist in the accumulation of data upon which he bases his daily practice. How few doctors review their own experiences simply, in the disposition of one of their desperate cases, but rather turn to these extensive clinical reports for the bases of their judgment? In return the specialist should reciprocate the kindness of the country doctor by courteous and fair treatment of himself and of his patients, as well as the mutual publication of such cases as will further enlighten the profession.

The assistance and protection of counsel one with another among general practitioners, irrespective of specialties, is apparent to us all, but the office work of the specialist is distinctly essential to the highest type of medical and surgical practice.

The *Lancet* (London), in its issue of Jan. 1, 1898, says: "The general practitioner has, as a whole class, fallen, we regret to think, upon ill times. His work has grown no lighter, his responsibilities are no less exacting, but in many directions his remuneration has decreased. He is suffering in part from the overcrowding of the profession, in part from the competitions of lay associations, in part from the faulty administration of certain great medical charities, and in part from the rampant prevalence of quackery, which enjoys in this era of civilization an immunity that is as perilous as it is astounding. Quacks there have been, and quacks there will ever be, but never, we believe, in the history of the world, have the mendacious statements of the charlatan enjoyed such credit, or his worthless wares been bought so cheerfully and so universally, at such exorbitant prices, as now, at the end of the nineteenth century." But as has always been the case, for ages past, at least, genuineness has its imitations, and as specialisms become luminous in medicine and surgery, the quack

becomes a reputed specialist. He enters the country town a being superior to the general practitioner. The chronic patient takes this opportunity to visit the so-called specialist, he gets the counsel for which he pays in advance, and after being duped and doped, he retires cursing the country doctor for once having told him his case was complicated, and was one for the specialist.

Dr. Willis P. King, in his book, entitled "The Country Doctor," says: "There are nurses and there are nusses." Thereby representing respectively the trained or professional and the quack nurse. In like representation we may say there are specialists and there are specialty-ists, the former representing the highest types of medical and surgical proficiency, and the latter their lowest types. The general practitioner has always been in demand since his advent in the arena of usefulness, and always will be. The evolution of the practice of medicine and surgery makes it necessary for him to make some changes in his professional and business methods in order to keep abreast of the times. But neither the high order of the specialist, nor the low order of the quack will detract from his usefulness, in the country districts, at least. The noble achievements of the specialist will give him better equipment and methods of treatment in the accomplishment of his mission to suffering humanity, while the vagaries and deceit of the quack availeth nothing.

Equipped with modern literature and appliances, directed by application and constant care for the welfare of his patients, the country doctor in the practice of medicine will be able to accomplish more in the future than in the past, and his services will be in increased demand even to the end of time.

"COLD" AS A CAUSE OF PNEUMONIA.

By Charles E. Page, M.D., Boston, Mass.

"She caught her death o' cold, takin' gruel out o' a damp basin!"

PROBABLY no one ever heard of a case of pneumonia that was not the result of an alleged "cold." It is generally believed by medical men, nurses and old ladies; in fact, it is the universal notion, that in every such case the patient caught cold which "settled on the lungs." The object of this paper is to dispel this idea entirely, as one of the most stupid and most mischievous fallacies possible to imagine. I say stupid, because there is so far as my own knowledge extends (and I have for many years made a special study of this question), not the slightest evidence that cold ever caused an attack of pneumonia, or, indeed, that cold is usually the cause of "a cold"*; while, on the other hand, the evidence is ample and positive that it is in every instance a filth disease, and that, generally speaking, the ones who take the most extreme, even excruciatingly extreme, care to prevent "catching cold" are most frequently attacked with, and have the worst form of "colds"!

The reason of this is clear enough, if we consider the fact that food is digested and assimilated in proportion to the needs of the organism for nutrimennt, these needs depending upon the amount of muscular and mental work performed; the degree of exposure to cold, relatively or actually; and upon the immediate condition of the body because of previous fasting or over-eating; and that indigestion and malassimilation are the most prolific causes of that stuffing up of the system which sooner or later provokes some sort of crisis, the symptoms of which are mistakenly attributed to "a cold." The evidence is ample from the observation and testimony of thoughtful men that over- or bad eating and under-exercising, especially when combined with an indoor life, are sufficient causes of the ill-condition that may lead on to typhoid, rheumatic, scarlet or other fever, pneumonia, etc., the first symptoms of which are almost universally attriubted to catching cold, albeit the sufferer cannot possibly recall the least exposure to cold or any indiscretion that could possibly have given rise to a cold. But because of this universal misconception as to the true cause of the disease, whenever the well-known symptoms appear in any case the victim is forced to the conclusion that he has caught cold! Being completely misled in this regard it naturally follows that he will take precisely the wrong means of "curing" the disease; instead of taking the back-track by means of fasting, fresh air and exercise, he is apt to keep right along eating, stay indoors and rest, and by this means he is likely to go from bad to worse.

For example: A very nice old lady in my native town, a constant sufferer from so-called colds, increased her precautions against such attacks to such an extent that she guarded herself absolutely from the alleged cause, viz.: cold air and draughts. She kept her room always above 75 F., with windows and doors so guarded as positively to forbid any possible, slightest chill. She was a "good feeder," but took no exercise to promote the digestion and help to eliminate the surplus.

She never went outdoors at a time when a chill was possible, and even clothed and wrapped excessively whenever she did venture into the free, open air. But in spite, really, as is known to all who have given this subject intelligent reflection, because, of all such precautions her colds grew more frequent and severe, till one fine summer day there developed pneumonia. Her sister applied a nice hot poultice over the chest (as is the prevailing practice, though its tendency would be to provoke congestion of the lungs of the most robust army mule) and sent for the village doctor, who put the finishing touch with the potent drugs so well known to the profession. The antipyretic employed enabled the old lady to die with a fairly normal temperature; while veratrum viride "slowed down the pulse" all right, till, finally, it was too slow for anything, so to say!

Just now the entire world is regretting the

* For a frail person, or one exhausted from fatigue, to sit or lie quiescent in a current of chilly air, or allow wet clothing to dry on, would be very imprudent and likely to produce disease.

untimely death of General Garcia, the grand old warrior who ought, and might easily have lived to see his fondest hopes realized for his beloved native land, but for a few weeks of ease, luxury, coddling and high living to which he was "exposed" on coming north at the close of the war with Spain. A reporter writes from Washington as follows: "General Garcia's death was a great surprise. Only a few days before his death, while temporarily stopping at the same hotel where he died, I sat but one table away from him at meal time. He looked well, strong, vigorous and was about the last person one would suspect as likely to succumb so quickly. During his entire career as one of the prime movers in the Cuban cause he had many hairbreadth escapes, to say nothing of the hardships and exposures of camp life, and yet he survived them all only to meet his death by a heavy cold [God save the mark!], in a palatial hotel, surrounded by the best of medical talent and under the most favorable circumstances!"

This grim old warrior, who had thrived on genuine exposure, wet clothing dried on, hunger and cold, and almost every conceivable hardship, was very speedily snuffed out by a brief exposure to luxurious living—warmth, comfort, an abundance of rich food, and—drugs. No one was near and in command who knew the value of the chest-chilling treatment and fasting in pneumonia, which alone was required to give the splendid old soldier the 25 chances to 1 against death, which is the record under correct treatment, while the chances for recovery under the prevailing treatment are only one-eighth as many. In other words, the death-rate under hydriatic treatment is less than four per cent. in pneumonia, against thirty-five to forty per cent. under the prevailing drug treatment.

In a series of several hundred cases of pneumonia, in hospital and private practice, Dr. Thos. J. Mays, of Philadelphia, announces a mortality of only 3.66 per cent. His method, which is doubtless the only scientific and truly physiological one, is that of chest-chilling by packing the chest with ice-bags (ice itself is never to be in contact with the skin under any circumstances in these cases), and continuing this until the breathing becomes deep and so long as the bodily temperature remains above 102 or therabouts. Chest-chilling in pneumonia (and the same is true of the cold bath, after Brand of Stettin, Germany, in typhoid fever) is not done for the purpose of directly and arbitrarily reducing the temperature—at least this is true of every practitioner who fully comprehends the physiological requirements of the case—but (with reference to pneumonia) for the purpose of bracing the lungs in a way to reduce the caliber of the boood vessels of this organ, since the local disease is due to the engorgement of these vessels with blood, the walls being stretched beyond measure, interfering with the free flow of blood, and at the imminent risk of completely closing the air-vessels and causing death from asphyxia.

In my own practice, and particularly when called in the incipiency of the disease, the ice-pack has never been demanded, the ice-cold compress (two to four folds of heavy towel wrung tightly from ice-water, with dry fold outside), changed every minute or two, and at lengthened intervals as the breathing becomes deeper and approaching the normal, always proves satisfactory. The importance of withholding food absolutely until the crisis is past, the patient convalescent and actually hungry, cannot be overstated. There is absolutely no possibility of digestion and assimilation in any case of high fever. It can truly be said that in every such crisis the entire energies of the organism are fully engaged in the work of reducing the local lesion and in the elimination of foul matters; hence every particle of food ingested is certain to do harm by fermentation, putrefaction and blood poisoning, without the slightest compensating influence. Feeding in all such cases is unphysiological and tends to increase temperature and to aggravate every bad symptom; while fasting and free water drinking promotes comfort, prevents all danger from indigestion, tympanitis, ptomaine-poisoning, and all the rest of it, and tends strongly to the speedy abortion of the attack.

Dr. Juergensen's dictum, "Wer fiebert erkaltet sich nicht," is endorsed by every thoughtful student (The fever patient cannot catch cold). Dr. Mays counsels the avoidance of careless cold water slopping about the pneumonia patient, "not because there is any danger of his catching cold, but simply to promote his comfort." And when we read of a typhoid fever patient, in his food, and drug-slugging delirium, rushing past his nurse and out into the icy streets and throwing himself into the river, in mid-winter, and being fished out after fifteen or twenty minutes and returned to his bed practically convalescent and going on to complete recovery, having thus a Brand bath, with active exercise in place of the constant skin-rubbing always enjoined in this treatment, we can but conclude that Juergensen is quite sound in his conclusions.

It is singular how superstitious notions may keep their hold on the people generation after generation. The false idea of cold-catching is perhaps less universally entertained at the present time than was true of the people a century ago, but it still seems to be the prevailing belief everywhere, and we read to-day that "Marquise de Fontenoy, speaking of the importance of the functions of the office of Queen Victoria's mistress of the robes, recalls how sweet Queen Marie Antoinette almost died of pneumonia through the temporary absence of that functionary, without whose assistance she was prevented by the etiquette of her court from putting on her chemise!" There was at that very time at least one man, and he one of the wisest who ever lived, Dr. Benjamin Franklin, who must have smiled at the alleged cause of the French Queen's illness; for in his "Essays," p. 216, we find recorded the great philosopher's conviction that "the causes of colds are totally independent of wet, or even of cold."

The eminent English physician, the late Dr. Levi Reuben, remarks that "there is a set of causes which, independently of temperature or exposure, produce genuine colds, marked by the

symptoms, course and results common to these ailments. The most important, *because most frequent* [italics his own], of these are repletion, and exhaustion from fatigue. Repletion or plethora—a surcharge of the blood with solid or liquid matters through the digestive organs—is a far more frequent cause of colds than the majority of the sufferers at all suspect. An overful meal taken at any hour of the day, by at once overtaxing and clogging all the operations of life, destroys the balance of the circulation, checks the action of the skin, gives rise to feverishness, and may produce or reawaken a bronchitis, acatarrh, or any similar difficulty. [Pneumonia may well be included in the list, since we are discussing this topic.] This is a prolific source of those 'colds' taken in midsummer, and in the mildest weather (notably grip epidemics, which never prevail except during mild winter weather when winter flannels and winter diet are as unphysiological and mischievous as they would be in summer), to account for which so perplexes their unfortunate subjects."

As the doctors' scapegoat, the general idea of colds is of incalculable value, helping them out of many a bad hole: "He caught cold and had a relapse from which he could not rally," or "He had a succesion of colds, one on top of another," etc. Thus we observe how this sort of ignorance, usually quite shared in by the profession, covers up the mischievous effects of the unphysiological practices of medical men. Every such set-back is due to other causes than the one assigned, and, next to the employment of potent drugs, most commonly to excess in diet, the constant ingestion of so many ounces of milk every two or three hours in pneumonia and typhoid fever, as is the common practice, in spite of lack of appetite, and even of nausea, tending to excite at a critical time all the evils described by Dr. Reuben as the result of repletion. It is a most brutal phase of "kicking a man when he is down," though done through ignorance and inspired by affection and professional devotion.

154 Tremont Street.

ULCER OF THE STOMACH.

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MY object in presenting this paper on gastric ulcer to this representative body is not to offer anything new, original or startling, but to call your attention to a very important yet very much neglected disease. Possibly there is no disease in the whole range of medicine that is so much neglected, so little understood, and consequently so poorly treated, as ulcer of the stomach. Too many of us, in the rush of an active, busy life, hastily diagnose indigestion, dyspepsia, or a bilious attack, and try to impress upon the confiding patient the belief that it is only a trivial trouble, when in reality there is lurking in the walls of his stomach an organic disease that may cost him his life at any moment.

Statistics tell us that at least five per cent. of all autopsies show either an open ulcer or the cicatrix of one that has healed. This fact, and the knowledge of professional neglect on the part of so many, have prompted me to offer a plea in their behalf. I know that many a valuable life could be saved and many a chronic sufferer—often ridiculed as a hypochondriac—might be restored to health and happiness if we all did our duty, instead of forcing them to quacks and patent medicines. It is not my purpose to detail at length the many symptoms, accidents and complications incident to this disease, as that is unnecessary in a body of this kind. I will only speak of the most important features, and try to impress its frequency and importance.

Simple ulcer of the stomach is a solution of continuity in the walls of the stomach, usually of a chronic nature, and shows little tendency to heal of its own acccord.

Its etiology is not very clear, but there are three factors which enter into its production, viz.: a local disturbance in the walls of the stomach, whether that be nutritional simply or due to trauma; an embolus or a thrombus; a hyperacid gastric juice; and a diminished alkalinity of the plasma of the blood. Given these factors, and literal autodigestion of the walls of the stomach will take place in that particular locality.

Age, sex, locality, occupation, corrosive poisons and alcohol are predisposing causes.

Ulcer may occur at any age almost, but it is extremely rare under ten years. It is more frequent between twenty and thirty-five, but more fatal between forty and sixty. The ratio of sex is almost two to one in favor of women. It is said to be more frequent in Europe than in this country. It is found in all classes, but is more frequent in the poor and overworked. Especially is this true in seamstresses, maid servants and cooks. Pressure upon the stomach is a cause, as is shown by its frequency in shoemakers, tailors and weavers. It is frequently associated with chlorosis and anaemia in young women.

Gastric ulcer is produced, and extends by a non-inflammatory, molecular necrosis, which may involve only the mucous membrane, or it may penetrate and erode all the coats of the stomach. They are usually single, but may be multiple. They vary in size from a small point to very large proportions. Cruveilhier reports one case six inches long and three inches wide. The usual size is about that of a twenty-five cent piece. They may occur at any place in the stomach that is accessible to gastric juice. The most frequent position is the posterior wall, the smaller curvature, and the pyloric end, though it is sometimes found in the anterior wall. It is round or oval in shape, has smooth, clean-cut edges that have the appearance of having been scooped out, if the case is recent. In old cases the edges are hardened and somewhat thickened, as a result of inflammatory exudation. The base is formed by one of the coats of the stomach; there is no pus nor sign of granulation. There is not only an erosion of the stomach but of the blood vessels as well, which gives rise to hemorrhage, which may be trivial, dangerous, or even fatal, depending upon the size of the vessel opened.

It is estimated that hemorrhage occurs in one-third of all cases, and may come from either the splenic, the pyloric, the coronary, the hepatic, the pancreatic, or the mesenteric arteries.

The ulcer may heal and leave only a small trace of its ravages, but sometimes, when there is a large one near the pyloric extremity, the cicatricial tissue so contracts as to cause a stricture. When all the coats are eroded, it produces either a general peritonitis or it is localized and results in an abscess. Anterior perforations are nearly always fatal, from general peritonitis or shock. Posterior perforations, on account of the adhesions to other organs, may rupture into the pleura, the pericardium, the lungs, or the bronchi.

Some cases are entirely latent throughout, and are never known until hemorrhage or perforation has occurred, or until it is accidentally discovered post-mortem. But these cases are very rare. Others present the ordinary symptoms of dyspepsia, and are usually associated with a general gastritis. The diagnosis here is quite difficult. But as it is possible to diagnose pneumonia without the rust-colored sputa, or typhoid fever without the rose-colored spots, just so I think we can be reasonably sure of this trouble. When these usual symptoms persist and are out of all proportion to the seeming organic trouble, and resist the ordinary treatment, we should have our suspicions aroused.

The main diagnostic symptoms are pain, vomiting, tenderness on pressure, and hematemesis. Pain is the most constant symptom, and its characteristics are that it is paroxysmal, yet, in some cases, there is a continuous pain of a dull, burning nature; the acute colicky or lancinating pain usually begins soon after taking food, and continues until it is either vomited or passes on into the duodenum, when it subsides. The location of the pain in a circumscribed spot in the epigastrium is really of more value than the quality of pain. In a week or two from the time the pain is felt in front they begin to complain of a pain in the back about opposite the last dorsal vertebra on the left, and will tell you that the pain extended through from the pit of the stomach. Next to the presence and character of the pain is the local tenderness, which is located about one inch below the end of the ensiform cartilage, and is not larger than an inch in diameter. The next important symptom is vomiting, but that is often absent. It usually begins soon after eating, but it is not characteristic unless it contains blood. There is generally an excess of acid, together with the food, mucus, bacteria, and sometimes bile and blood. The last and most important symptom is hemorrhage. If it is slight, the gastric juice changes it so that it has the appearance of tar or coffee grounds. When it is severe it comes up a bright red arterial color, and not coagulated. The patient passes rapidly into a state of complete collapse, and sometimes death may intervene before anything can be done.

It is estimated that about six per cent. of all cases result in perforation. It is more frequent and more fatal when it occurs in the anterior wall. Perforation usually occurs when the stomach is distended with food or gas, or during a sudden exertion, as in coughing or vomiting. If they do not die from the shock, peritonitis soon sets in, either general or circumscribed, which depends upon location.

The differential diagnosis lies between ulcer and chronic gastritis, gastralgia, hepatic colic and cancer of the stomach.

The symptoms of chronic gastritis are very similar to ulcer, except that they are not so severe. Hemorrhage is rare and less severe, vomiting less frequent, and the pain is less and more constant.

In gastralgia the pain is not increased by taking food, but often relieved; pressure relieves the pain, but it is not relieved by vomiting, as in ulcer. No specific place of tenderness in gastralgia, and no emaciation, is perceptible, while there is in ulcer.

The sudden onset and disappearance of the paroxysms and the complete relief between them, the location of the pain on the right of the median line and radiating to the shoulder, the jaundice and the enlargement and tenderness of the liver and gall-bladder is sufficient to differentiate gall-stone from ulcer. The diagnosis between cancer and ulcer is more difficult. In three-fourths of all cases of gastric cancer there is a tumor, while there is none in ulcers. Cancer is rare before forty, while ulcer is more frequent before forty.

Ulcer is more frequent in females, while there is no difference in cancer. The duration of cancer is one or two years, while an ulcer may last thirty or forty years or longer. The pain of ulcer is more severe and paroxysmal, while in cancer it is less lancinating but more constant. The appetite in ulcer is good, but impaired in cancer. The cachexia is more marked in cancer. Hemorrhage is less frequent and more severe in ulcer, while in cancer it is frequent but not severe. In ulcer the vomiting comes on after eating, while in cancer it may not occur for one or two days, and then the vomited matter is quite large, and contains cancerous fragments, but no free hydrochloric acid. Vomiting relieves the pain in ulcer but not in cancer.

Whenever the symptoms are such as to make us suspect ulcer, appropriate means should at once be adopted to check it, and must be persistently carried out. The factors to be met are, give rest to the stomach, prevent all irritation to the ulcer, relieve the pain, prevent vomiting, control hemorrhage, and sustain the patient's strength. To meet the first two indications, put the patient to bed, keep him absolutely quiet, and withhold all food from the stomach. Allow no food in the stomach for several days. In the meantime resort to rectal alimentation. After five or six days we are forced to give some nourishment by the stomach, as the rectum makes a very poor stomach at best. Put only albuminous food, that has been previously converted into peptones, in the stomach at first, so that absorption will take place easily and rapidly, and render the physiological peristalsis and secretion of acid unnecessary. Milk that has been previously peptonized

is the ideal at first. But as this has a bitter taste it soon becomes repulsive, when we may give fresh milk with lime water, or some other alkali. By the end of the second week we may add egg albumen in the shape of raw eggs. In the third week soft boiled eggs with well toasted bread soaked in milk.

Specific directions as to the time, quantity and quality of the diet should be written down, and the nurse thoroughly impressed with the importance of a strict adherence to them. At first begin with two or three ounces every two hours, and gradually increased to one quart, and then to two in twenty-four hours. Thirst is relieved by crushed ice.

By the fourth week, if there is no pain or vomiting, raw beefsteak, finely scraped, and raw oysters without vinegar are allowed. From this time a gradual return to a light mixed diet, but care must be taken for a long time not to eat coarse articles.

Next to rest and diet in importance comes lavage. This is beneficial to relieve the associated gastritis, but must be used with great caution, taking care never to over-distend the stomach, for by so doing we separate the edges of the ulcer, the granulation tissue is broken down, and cicatrization is prevented. There is danger of inducing hemorrhage or perforation unless care is taken to introduce a limited amount and see that it is all carried out.

While rest and diet and general hygiene are by far the most important measures in the management of this disease, I would not have you think that medical treatment is of no avail. We scarcely ever see a case that opium is not indicated at some time, either to control pain or some complication.

The diminished alkalinity of the blood and the excessive acid in the stomach will call for the administration of alkalies. Bicarbonate soda in twenty grain doses before taking food or when in pain acts admirably. Subnit. bismuth in half dram doses also serves a good purpose. Carlsbad salts fulfill the above indications, and at the same time keep the bowels open. I have no confidence in nitrate of silver.

When hemorrhage occurs the patient should be placed in the recumbent position, with the head low. Give morphia and atropia hypodermatically to quiet peristalsis; ergotine to contract the arterioles. Apply an ice bag to the epigastrium. I have little confidence in acetate lead, tannin or any astringent. Allay thirst by small quantities of ice. In severe cases apply a ligature around the arm and leg. If collapse is marked, inject a saline solution in the veins, which I think is preferable to transfusion. Perforation demands an operation at the earliest possible moment.

As soon as cicatrization is fairly established we must combat the existing anemia by the milder preparations of iron. The treatment will usually require a period of three months before we can be sure that cicatrization is complete. Even then relapses do occur.

In those cases that are seen early, before any hemorrhage has occurred, where it is impossible to inforce absolute rest, I would give a liquid diet, preceded by large doses of bismuth subnit. I have gotten very poor results from nit. silver, although some recommend it highly.

ENTERO-LITHIASIS—WITH REPORT OF CASE.

By E. J. Neathery, M.D., Van Alstyne, Texas.

Of all forms of bowel disorders I suppose entero-lithiasis is least suspected, and occurs less frequently than almost any trouble with which we have to deal. Yet it does occur more frequently than most of us suppose. I do not doubt but that numbers of these formations pass unnoticed at various times from patients suffering internal disorders, and from some who do not have a pain, and apparently in robust health, and yet, in our careless way, we fail to recognize them. Entero-liths, in my opinion, often causes many symptoms in obscure cases for which we are unable to account, and, in institutions where autopsies are possible, they often clear up a clouded diagnosis.

Generally these formations are composed chiefly of phosphates of lime and magnesia deposited around a nucleus; but this is not always their composition, nor is a nucleus necessary to their formation, but a nucleus as a focus is the rule. They are usually found in the caecum and the colon, but may be found in any part of the intestinal tract from the stomach downward to the outlet. In size they rarely exceed that of a hazel nut, but they may be much larger. In fact, one was removed from the colon by Monroe, Sr., of Edinburgh, which weighed four pounds, and another is reported which measured eight inches in circumference. As a rule there is only one found, but perhaps two or three and as many as thirty have been removed from one stomach, and in another case nine. The above quoted Monroe—who, by the way, seems to be authority on this subject—reports a case where he detected twelve by the touch, in the colon of a boy during life.

Two or three of these formations have been known to become united by their close contact in the intestines. Any solid substance upon which the gastric juices have no effect may become a nucleus, the most common being gall stones. Pieces of hardened feces, the stones of fruits, such as cherries and plums, and small pieces of bone, the seeds of figs and other fruits, the woody knots in pears, may all conduce to their formation. Starch and carbonate of magnesia, when taken for a long period, are supposed to be potent factors in their formation. Entero-liths occur often in those who eat largely of oatmeal, and the nucleus then consists of the fiber of the oat. This variety is usually designated avenoliths. The Scottish people suffer most from this variety, and it is thought to be due to the great amount of oatmeal devoured daily by them. These formations have a velvety appearance, fibrous, and analogous to the little hairy end of the husked oat. Dr. Cliff years ago was the first to point out this particular form of enterolith, and to suggest its cause.

The treatment of this disease would be that of any obstruction, for we rarely suspect the trouble until we have either partial or complete occlusion. Should it be detected without the grave complication of obstruction, their removal from the bowel, if possible, should be effected, and then the cause looked into and the offending food discontinued. The bowels should be regulated, as almost all cases give a history of habitual constipation. When a case presents the symptoms of obstruction, and the diagnosis is that of an impacted entero-lith, it is all-important not to wait in operating until irreparable damage is done by reason of pathological changes in the part. After the abdomen is opened, and the impaction located, an effort should be made to crush the stone by gentle pressure, provided the wall of the intestine is in condition to warrant the attempt. If this does not succeed one or two methods are open for consideration, namely, entereotomy, or the method suggested by Tait, which consists in passing a small needle into the mass in an oblique direction, breaking it up in that way. If entereotomy is attempted, the mass should, if possible, be moved upward or downward before making an incision, thus giving a healthy bowel in which to place the stitches. If the bowel has already become gangrenous, resection should be accomplished and the segments brought together, my preference being circular entereorraphy. Langenbach reports a case of the stone forming in the stomach and lodging the jejunum, and below I report a similar case in my own practice.

During the months of May and June we had a great many cases of acute indigestion, as evidenced by incessant vomiting and purging. During the height of the epidemic Mrs. S. came to have me prescribe for her husband, who she said was at home sick. By careful inquiry I arrived at the conclusion that he was suffering from the prevailing complaint, as he had all the symptoms of the trouble. I prescribed the usual remedies, such as I had found effectual in similar cases, with the injunction to report to me the next day if there was no improvement in his condition. In the afternoon of the following day I was called and found him, as he thought, better. I was informed that his bowels had checked promptly, but the purgative of calomel and podophyllin that I had prescribed had not acted. He was restless and uneasy, had vomited bile once or twice through the night; had no fever, pulse 80, bowels flat and apparently empty. He gave history of habitual constipation, but not extreme. He had a healthy appearance. I gave three c.c. pills and left three more, which were given in six hours, as directed, but without an action. I then ordered sulphate of magnesia in tablespoonful doses every two hours until the next morning, without any effect. By that time the patient was vomiting bile every three or four hours; no fever, no tenderness or tumor over the abdomen, bowels still flat, no peristalsis, pulse 90, still restless, anxious expression. By giving no water, but chipped ice, medicine was retained the next 24 hours fairly well; in the meantime I gave castor oil to the extent of one pint. High rectal injection was used with electricity to stimulate peristalsis. My diagnosis was obstruction from unknown cause. I had two gentlemen see the case, in consultation. I suggested an exploratory incision, which was thought inadvisable by counsel. There was still no tenderness, no fever, no swelling of the abdomen, but patient gradually becoming weaker. Counsel suggested a repetition of what had been done, viz.: calomel, rectal injections, and oil, which was repeated for the next 24 hours, without any results except to farther weaken the patient. Atropia and strychnia were freely given hypodermatically. On the following day two other gentlemen saw the case with me. Calomel and castor oil were again suggested, one-half pint of castor oil being given at one dose and retained for some hours. You can imagine how thoroughly disgusted I was becoming with this line of treatment, but as counsel did not advise an operation, and as the patient was very much averse to such a proceeding, I had nothing to do but try again. On Friday morning patient complained of great restlessness and pains in lower extremities; no fever, no tenderness, abdomen flat, peristalsis absent, no tumor visible, abdomen very much relaxed.

Morphine was given to relieve pain in limbs and quiet restlessness. I again urged an operation, which was agreed upon by counsel and consented to by patient at 12 M. At two p. m. a median incision was made below the umbilicus large enough to admit the hand. The bowel seemed entirely empty both of solid elements and gas. On passing my hand upward it came in contact with a hard mass in the upper part of the small intestine just beneath the transverse colon. On bringing the gut down the mass was about the size of an egg, and pressed so tight that the gut was largely distended to accommodate it. I could not move the mass up nor down by gentle manipulation, neither could I crush it. An incision was made and the contents turned out. The bowel looked healthy in its distended state, but after the pressure was removed it turned a little dark. one spot in particular, which was turned in with the sutures. The advisability of resecting was considered, but all thought chances were better not to resect, as under a stream of hot water for a few minutes the color became normal, with the exception of the one spot, and we purposely made the incision through it, so that it could be turned in. We closed the wound with the Lembert-Czerny sutures, and sutured the abdominal incision in the usual way, and applied an iodoform gauze dressing. The patient was so thoroughly exhausted that the extra time necessary to resect would have been very hazardous. Patient rallied promptly and expressed himself as feeling better than for several days. Pulse dropped to 94, vomited twice before dark, but no bile. He rested well through the night, but complained of being hungry; was given predigested food and whisky by the rectum. After midnight he took food by mouth, also water, this being the first food retained in nearly seven days. Bowels acted in the morning, and he was quite cheer-

ful until early in the afternoon, when he became delirious. All the symptoms of perforation set up and at five p. m. he died.

I believe that if the operation had been performed 24 hours earlier, weak as he was at the time of the operation, and Monsel's method of anastomosis, or some other rapid method, been adopted, he would have been alive to-day. It is, gentlemen, in this class of cases where waiting too long brings the surgeon into disrepute and fills his mind with regret, and by all such cases dying, causes our patients to view an operation as an ante-mortem procedure, and consented to for the gratification of the surgeon.

HEMORRHAGIC MALARIAL FEVER.

By Fleming I. Moody, M.D., Dothan, Ala.

PRIOR to the war between the States, it seems that the subject of this paper had attracted but little attention from the profession. Sporadic cases occurred now and then, but not to the extent of claiming much importance. It was commonly called "yellow disease," till after a medical convention held during the later sixties at Selma, Ala., when it was given the name "Hemorrhagic Malarial Fever." By this time it had assumed almost the proportion of a fearful epidemic along the water courses of the Gulf States. We find in this disease all the essential anatomical lesions usually found in other malarial fevers, to wit: dark pigment particles in the blood and various other organs, the usual changes in the liver, spleen, marrow of the bones, etc.

In the majority of cases the attack is sudden. After a more pronounced chill, the patient is horrified to find on passing his urine that it is intensely bloody in appearance. At first it is excessive in amount, and later on diminished. It is of a dark reddish brown color, sometimes almost black. It contains only a few red corpuscles intact, but an abundance of hemoglobin. It is albuminous and generally acid. The patient soon grows restless, tossing from side to side of the bed, intense thirst, nausea and vomiting and sometimes black vomit occurs. At this time the patient begins to turn yellow, which increases rapidly, and in the more malignant types often deepens to the color of gold in a few hours. There may be bleeding from the nose, bowels, and, in cases of females, from the uterus. The thermometer usually registers high, often as high as 106 or 107. The pulse is rapid, small and feeble, and there is great prostration. There may be delirium, but this is not a constant symptom, the mind usually remaining clear to the last. This condition may continue but a few hours, to return with all the above symptoms with the next paroxysm. I have observed the hemorrhage form of malarial fever obeying the laws of periodicity in the successions of paroxysms known as the quotidian, the tertian and quartan: also the compound or double types of each. In my observation the intermittent, or "chill and fever" type often precedes an attack, and which may or may not continue in this form after its development into the hemorrhagic form. Males, oftener than females, have it; probably because they are more exposed to malarial influences. The changes in the blood are most probably caused by the slow action of malaria, or the plasmodium malarie of Lawron, upon the red corpuscles and in some way killing or destroying them, thereby dissolving and setting free thin coloring matter, which stains the tissue through which it passes. The yellow condition is not a true icterus, but an icteroid condition, resulting from the coloring matter of the diseased corpuscles. The kidneys rarely show any marked changes, and seem to be performing an effort of nature to eliminate from the blood the dead corpuscles with their changes, which is not only a salutary effort, but a necessary one of safety of the patient's life. The anatomical arrangement of the kidneys is such as to peculiarly fit them for this process of elimination, from the fact that in them only one vein accompanies an artery, which greatly favors pressure, and consequently escape of red corpuscles, this coloring matter, etc. The patient rarely dies with uremic convulsion or coma, which is sufficient to establish the belief that the kidneys are not materially affected. The diagnosis is not difficult. From a true hematuria, or paroxysmal hemoglobinuria, we have the absence of the malarial history. It is sometimes mistaken for the epidemic or endemic jaundice which often prevails in our country, but a test of the urine with guaiac and turpentine will readily determine the diagnosis. The prognosis is favorable or unfavorable in the ratio of the degree of malignancy displayed. Its violence has remarkably decreased in the last twenty years, and we rarely see any but the milder types now, whose intrinsic tendency is to recovery. The treatment embraces all the remedies usually employed in other malarial fever. Mercury, followed with salines, phenacetine or other antipyretics are to be used as indicated. The mineral acids are usually well borne by the stomach and doubtlessly good. Lemonade and ice water to allay the great thirst are useful. Sometimes a small blister over the epigastric region has marked influence in allaying nausea and vomiting. Morphine, hypodermically, to relieve the great nausea and vomiting and restlessness, is demanded and absolutely necessary. Astringents and hemostatics are injudicious and should never be given. Chinoidine in the milder types often seems to act well, and may be borne by the stomach. Stimulant and nutritious diet in liquid form must be given in sufficient quantities to meet the emergencies of each case. In fact, almost any treatment in the milder types will suffice, and our patients get well. But there are types of the more malignant order of this disease with which we occasionally encounter that can only be successfully met with one remedy, and that remedy is quinine, hypodermically administered. Quinine by the stomach, especially when there is great gastric disturbance, can only do harm, and never reaches the circulation, the stomach being utterly inert. The local

action of quinine is an irritant and can only aggravate the already existing gastritis. During the years from 1876 to 1880 hemorraghic malarial fever prevailed to an alarming extent along the valley of the Chattahooche River, and in all of its most malignant forms—nearly every case taking on a congestive or pernicious tendency. During this period I had ample opportunity to thoroughly test the different modes of treatment. In every case treated hypodermically with quinine, in time a recovery followed, while under other modes of treatment the mortality was fearfully great. The bisulphate and the amorphous-hydrochlorate are easily dissolved and well adapted to hypodermic use. But it was upon the sulphate I chiefly relied when a very malignant case was to be treated. In that type, characterized by intermittency, arsenic is especially useful. During the latter part of the disease, when the urine is somewhat diminished, diuretics should be given. So soon as the paroxysm is broken, the patient should be put upon restorative treatment, embracing iron, quinine, strychnine and arsenic, to prevent a return. A change of climate to the seashore or mountain is often advisable.

PROSTATIC IRRITABILITY AND ENLARGEMENT—A SEQUENCE OF THE HEMORRHOIDAL STATE.

J. L. Jelks, M.D., Memphis, Tenn.

OUR experiences with prostatic troubles, and our attempts to relieve or ameliorate, be the procedures however mild or radical in their nature, have been met with uniformly unsatisfactory results, save the small number which have survived most formidable operations; therefore, in view of my recent experience in a few cases, reports of which follow, I am persuaded that the results obtained in such cases may afford the speaker and the Society a nucleus for thought and discussion of interest and benefit. I will not bore you with lengthy claims and excuses, but from the cases recited you may draw your just conclusions.

Case I. Mr. L. E.; aged 35; Memphis, Tenn. Had suffered several years with obstinate constipation, hemorrhoids, and an enlarged and irritable prostate. His habits were sedentary, and the service as bookkeeper required him to sit or stand for a long time in one position. Various attempts varying of success, had been made to pass sounds and catheters, some of which attempts were made by myself. For several years he had been treated for cystitis, with as many remedies, and probably as many physicians. When he applied to me for relief of his hemorrhoids and obstinate constipation, I rather feared that the operation and probable necessity of drawing urine for several days would aggravate his prostatic trouble; however, the operation was finally resorted to. Assisted by Drs. J. A. Lipscomb and R. S. Stanley, I dilated the bowel thoroughly and displayed a number of hemorrhoids in a more or less inflamed state. One of these, the last tied off, was at the base of the prostate, and the tie taken upon it was a signal of a marked nervous shock. This tumor was not very large, but presented an angry appearance. There were also some ulcerations, which were cauterized with pure carbolic acid, as was the entire anterior portion of the gut for three inches, when finally iodoform was well insufflated upon the surfaces and a gauze dressing, cotton and (T) bandage were applied. Morphine was administered through the first day and night, after which sulphounal in twenty grain doses substituted quite well. The urine was drawn for three days, difficulty being experienced in passing catheter. Patient was dismissed on the tenth day, but made occasional visits to my office to report. For three months he had some tendency to constipation, a tonic in character, which yielded finally to out-of-door exercise, daily enemas of cool water, and the administration of pills: Aloin, belladonna, ipecac, et strychnia. He is now entirely relieved of all symptoms of prostatic or rectal troubles and of their attendant symptoms and sequalae.

Case 2. I was called to Searcy, Ark., to operate on C. H., aged 60, who had been operated upon 20 years previously by Dr. Eve, of Nashville, Tenn., for hemorrhoids. When I arrived I learned that for a number of years he had suffered with enlarged prostate, which gave him much trouble. I believed, as is the reverse of general acceptance in such cases, that the enlarged and irritable prostate was the sequence, in great measure, to the inflamed hemorrhoids, rectal ulceration and irritability. When bowel was thoroughly dilated, numerous tumors were found in a varying state of inflammation. One which I would call special attention to was a large red tumor under the base of the enlarged prostate gland. The tie taken upon this tumor was a signal of a marked influence on the nervous system, though the patient was apparently thoroughly etherized. After the operation more than the usual amount of suffering following this operation was manifested. The urine was drawn for a week, and uric acid poisoning evidently supervened. The gentleman recovered in due time, and has since been greatly relieved of all of his trouble, and the fact that he is relieved of a constant source of irritation in a part which is in close proximity to the prostate gland, and supplied by the same general system of vessels (pelvic), presided over by the same nerve supply, is reason sufficient to expect a benefit more or less permanent.

Case 3. C. C., aged 58, Memphis, Tenn., to whom I was called by my associate, Dr. R. L. Knox, had sustained several injuries in the army of the Southern Confederacy, and since has been subjected to many irregularities of living. His trouble dates back 20 years, and he is reminded that the beginning of all his suffering and anxiety was obstinate constipation. He rather applied to my associate, Dr. Knox, for treatment of a prostatic trouble and insipid diabetes. He was required to rise five to eight times during the night to void his urine, which, when tested, demonstrated this enormous increase in quantity and frequency of its voidance to be a symptom

rather than an organic disease of the kidneys. Being frightened at his condition, he readily accepted my promise of a probable benefit by the removal of his hemorrhoids, which dated back to the beginning of his prostatic trouble. On March 2, I operated, having to assist me Drs. Knox and Terril. A number of hemorrhoids were removed, the same especial attention being given to the one found at the base of the prostate. Here I wish to add, that, in this case, a week before the operation, so much pain and tenderness was experienced in the region of the gland that his physician feared an approaching abscess. Digital touch per the rectum, or perineum, was excessively painful, especially the former, when the finger was made to impinge against the anterior wall. After tying and cutting away the tumors, carbolic acid was freely used, especially where there was any ulceration. April 9 he came into my office and stated that he was entirely relieved, and would not longer know he had a prostate, if he could forget the 20 years past of suffering. I do not know the exact extent to which this operation may reduce the size of the prostate in any given case, if at all. I am, however, prepared to say, that in a certain number of cases, benefit more or less permanent will be derived, as my limited experience goes to prove. Surely the earlier is the better to strike at any cause to remove or to ward off that sequence. How often we note that during the active stages of a gonorrhoeal urethritis, especially when the deep urethra is involved, our patients call our attention to the sypmathy indulged in by this contiguous organ, the rectum, which sympathy, indeed, often amounts to the hemorrhoidal state, never previously experienced?

Then, in turn, we may have an irritation, inflammation, and finally enlargement of prostate gland, as a sequence of rectal disease.

Thanking the Association for the manifested interest, and your appreciation of my paper, I beg to recall to your minds the close anatomical relationship, and if you please, Mr. President and gentlemen, in order to elucidate the important role played in the causation and aggravation of symptoms in and about the rectum and its contiguous organs, a brief review of anatomical relationship of these may prove not amiss, only those vessels, nerves, etc., being mentioned which I deem of chief importance. The blood supply is derived from: first, superior hemorrhoidal, a branch of the inferior hemorrhoidal; primary and secondary, branches of internal iliac, which supply the chief amount of blood to all the pelvic viscera.

The inferior hemorrhoidal, which is a branch from the internal pudic, passes across ischio-rectal fossa, supplies lower part of rectum, bladder, prostate, perineum and external genitalia.

The veins, superior and inferior hemorrhoidal plexuses anastomose freely with vesico-prostatic nerve supply. This being abundant, is derived from the hypo-gastric plexus of sympathetic, also a direct supply from fourth anterior sacral nerve, the only part of the alimentary tract supplied direct from spinal system; thus is explained the great irritability and sensibility of this part. The sphincter being supplied from more sources than any other muscle of the body, derives nerve supply from internal pudic, fourth sacral, and posterior sacral nerve; hence, "in the male, pain in the bladder, penis, urethra, scrotum and prostate may be directly traceable to the rectum as their source."

In answer to a question, I will repeat that prostatic trouble of 20 years standing had been relieved.

I do not know that the prostate in either of these cases has been materially reduced in size, but that the relief of symptoms, and restoration to an apparent normal state of affairs in them, would seem sufficient evidence of the rationale of the procedures referred to, where the hemorrhoids and rectal irritation co-exist, having before our mind's eye the intimate relationship (anatomical), the irritant surface, and leading therefrom to the nerve centers, the afferent nerve supply, and thence through the afferent nerves, distributed to the first named, and sympathizing parts or organs. Muscles, nerves, and vessels, each claiming due recognition of importance, while the effect of pressure alone exercised by these tumors upon contiguous parts, should not be lost sight of.

SURGICAL TREATMENT OF EMPYEMA, INCLUDING PHLEBOTOMY OF LUNG.

By T. W. Shearer, M. D., Wallisville, Texas.

THIS brief paper is based upon a personal experience with a few cases of empyema, and without going further into the etiology of the subject than to state that most cases of empyema are secondary to pneumonia, pleurisy or tuberculosis, or due to some form of traumatism, necrosis or infection. The prognosis of the disease is much more favorable than in former years, and especially is this the case since the introduction of antiseptic surgery, knowing as we do, that pus wherever found means the presence of one or more of the pyogenic microbes.

As soon as pus is discovered in the pleural cavity it should be removed. Should we have reason to believe that the quantity is small and of the sero-purulent type it can be removed by aspiration. This, in the main, applies to acute cases. If the pus recurs the pleural cavity should be opened at once, and proper drainage established. Free incision and drainage should be resorted to in all chronic cases.

It is probably best not to irrigate in acute cases, and in chronic cases as long as there is constant and rapid improvement after drainage is established. The indications for irrigation are rapid pulse, erratic temperature, prolonged continuance of discharge, and lack of rapid general improvement. The pleural cavity should be opened at the most dependant part, usually midway between the sternal and vertebral attachments of the rib, and whatever mode of drainage is adopted it should be free and complete. I have always obtained good drainage by making a free incision and inserting a rubber drainage tube a half inch in diameter, making this fast to

the skin with a safety pin and placing inside of the rubber tube a smaller glass tube bent at right angles. Where irrigation is necessary, remove the glass tube and irrigate with a straight tube of smaller size, which, with the rubber tube, makes a return flow irrigator. If we are to irrigate, it is proper to ask the question: "What are we to use?"

Wyeth uses bichloride of mercury, 1 to 3,000, or even 1 to 1,000, with good results and no poisonous symptoms. This would indicated that the pleura is no more sensitive than other similar organs of the body; although I would much prefer to use boiled water, borated water or 1-50 to 1-20 solution of hydrogen peroxide. The cavity should be irrigated thoroughly by using from one to several gallons of solution, or until the return flow is clear and no longer contains pus. This is not usually required oftener than two or three times a week, although cases occur that require daily irrigation for a time; these are cases where there is great alteration of the pleura, and may require currettage to hasten the cure.

The lung is always more or less collapsed in cases that have continued for any length of time, and the process of reinflation is gradual. A lung that has been rendered perfectly useless will largely regain its resilience and usefulness where serious structural changes have not occurred, in which case the lung will fail to fill up the pleural cavity entirely, the case will be more chronic, and may require a plastic operation similar to the procedure known as Eastlander's. However, this is the exception. It is needless to add that any operative procedure should be done under rigid rules for cleanliness, and the wounds dressed antiseptically.

Report of Cases.—Case No. 1.—G. B., a native Texan, age 19, white, had suffered a long time with symptoms of phthisis, high temperature, cough, excessive expectoration and pain in the side. I saw this case in the last stage of disease, a bronchial fistula already existed. We proposed the operation for empyema, which was refused, and in a few days during a paroxysm of coughing the fistulous opening suddenly enlarged, and he died of asphyxia while expectorating large quantities of pus.

Case No. 2.*—H. F., aged 20 months, white, native of Texas. She developed empyema from pleuritic effusion complicating typhoid fever. The pleural cavity was opened by free incision, one pint of pus evacuated; no other means of drainage was used, and no irrigation. The opening discharged pus about 10 days, and closed with no further trouble. The patient rapidly recovered health.

Case No. 3.—N. S., age 17, white, native of Iowa. She contracted pneumonia during the month of April, 1896. Was treated for the same by physicians in Iowa. Did not entirely recover from the attack. She lapsed into a debilitated condition with a harassing cough. She came South for her health the following October, arriving about that time in Galveston. She was examined by two physicians of unquestioned ability in that city, and a very unfavorable prognosis given. In fact, her case was pronounced one of advanced tuberculosis, although the expectorated material, which was abundant, did not disclose the presence of the tubercle bacillus. She had for a long time been unable to lie in the horizontal position, having slept in a reclining chair for about eight months, although she was up and about for the greater portion of the day.

During the winter of 1896 and 1897 the patient was seen by me and, being related to her by direct sanguinity, and knowing her family history, both grandparents on both sides being still alive and well, and no intermediate cases of tuberculosis, I did not believe it to be a case of acquired tuberculosis. After making several examinations of sputa at different times, each time failing to find the tubercle bacillus, but finding the pneumococcus of Friedlander, and a host of pyogenic microbes, and among them streptococcus pyogenes, bacillus pyogenes foetidus, and pyocyaneous, which is always present in blue pus, and in size and appearance much resembles bacillus tuberculosis. The presence of these bacilli led us to suspect empyema with a probable bronchial fistula; besides the patient had a pus temperature, and dark muddy cyanotic appearance with more or less pain in left side. The pleural cavity was opened under cocaine anaesthesia, and a large quantity of blue pus evacuated. No further drainage was used for some time, there was considerable improvement, but a rapid pulse, and erratic temperature, with continued discharge, indicated that further drainage was necessary. The patient was anaesthetized with chloroform and the opening enlarged, a rubber drainage tube half inch inside caliber inserted and pinned to the side of the wound. The pleural cavity was then irrigated with warm sterilized water until the return flow was clear and no longer contained pus. The cavity was then flushed with a solution of peroxide of hydrogen, one to twenty, a piece of glass tubing bent at right angles was inserted into the rubber drain to keep the same well open and the wound dressed with iodoform gauze and borated cotton. The pleural cavity was again irrigated upon the third day, and one week from this time the discharge had about ceased. The tube was removed, and the wound sealed with collodion and cotton. The patient at this time seemed to be suffering very much from cyanosis and dyspnoea. There was dullness upon the opposite or right side. Thinking that perhaps some of the fluid used in irrigation had become pocketed upon this side, or that there was a fresh pleuritic effusion, an aspirating needle was passed into the pleural cavity. No fluid was found. The needle was passed into the right lung, which was edematous, an ounce of dark venous blood was drawn off and the needle withdrawn. This last procedure seemed to have a remarkable effect upon the case. In six hours the breathing was greatly improved. The cyanosis disappeared gradually, and without any further surgical interference the case progressed rapidly to a most favorable termination. She has now been perfectly well for nearly a year,

*Reported, as one of thirteen cases of typhoid fever, in "Transactions of State Medical Association of Texas," 1893, page 143.

and weighs more than any of her three sisters, of which she is the youngest. There is, however, some slight difference in the two sides, the left lung not having entirely recovered from the collapsed condition.

SUBCUTANEOUS ARTERIAL LIGATION.

By Thos. Jay Pugh, M.D., Hearne, Texas.

THIS is a new mode of tying arteries, very simple, and to my mind it is less objectionable than the old way of cutting down through the skin and tissue to the vessel.

Objections might be raised to this mode of procedure; yet when we remember that it is *results* that we want, and when all reports on this form of operation give perfect results, then of just reason this operation takes precedence as the correct one. Of course when amputations must be performed and abdominal sections made, the vessels are brought to view by the incisions necessary in these operations; but in minor wounds of the extremities, also of the neck and head, subcutaneous arterial ligation can be resorted to; and even in amputations of the femur, at any one of its subdivisions, I would not hesitate to throw a ligature subcutaneously around the femoral artery as a temporary haemostatic. The large, well curved needle, armed with a stable aseptic thread, could, after perfect anaesthesia, be passed down through the skin and underlying tissue, taking in its course muscle, artery, vein and nerve. But with these preliminary remarks I will proceed to relate my experience in this digression from the old into the new way.

First Case in 1884.—A man, 40 years old, caught in the moving machinery of the gin on the Cavitt plantation near Mumford, Texas. All the metacarpal bones of the hand were broken. The radial and ulnar bones were broken in the middle and lower third, and the bones were split up and protruded through the bruised and lacerated flesh. The os-humerus was also broken above the elbow. Amputation being called for, I did the operation at the upper third of the forearm, and put the broken os-humerus in pasteboard splints and bandages. After tying the principal arteries, the ulnar and radial, I found there was another bleeding vessel which I could not find and tie, and in my dilemma I conceived the idea of *subcutaneous arterial ligation*. Acting upon this idea, I simply passed a curved needle, with ligature, into and around the mass and tied the same. The bleeding was immediately controlled, and the man, without much pain, recovered entirely.

This success being all that could be desired, I was prompted to use it in another injury of the arteries calling for ligation.

My next case was in June, 1892. Taylor W., a white man, who, some six days previous to my visit, had cut a long deep gash in his foot, severing the dorsalis pedis artery. Local astringents and compression had been used for six days and nights with no good results. I had been called in consultation with the attending physician in this case. It was suggested that we cut down on the anterior tibial artery at the lower third, and tie the artery. I objected, as I thought *cutting was unnecessary*. The attending physician left the matter with me, and after having chloroformed the patient, I passed a large curved needle with strong silk around the artery, and out on the opposite side from entrance. This of course included the skin, muscles, nerves and blood vessels. The hemorrhage ceased at once. The stitch or ligature was withdrawn on the fourth day, and the patient made rapid recovery.

A third case, Patsey M., injured in a railroad wreck near Hearne in 1893. The radial artery was cut some two inches above the wrist. The hemorrhage was profuse. I ligated the artery both below and above the site of injury. Subcutaneous arterial ligation was used in this as in the other cases.

No less authority than Dr. S. S. Thorn, of Toledo, Ohio, an ex-president of the American Railway Surgeons' Association, has written me a special letter of commendation of my operation. The doctor also gives me priority in the operation and in reporting the same.

We have been taught not to include a nerve in our ligature, and, for my part, if I could see the nerve and artery, I would not tie the two together. But I hold that in my operation—subcutaneous arterial ligation—no harm comes from including the nerve with the vein, artery and muscle. All of this tissue, sufficiently tight around the bleeding vessel to insure its haemostatic power, surely guards against any pain being given out from the nerve; the pain is at least so slight as to be controlled with small doses of morphine every six or eight hours.

In conclusion, I will say several physicians of my acquaintance have used this mode of tying arteries, and in every case with perfect satisfaction.

In the osseous or degenerate artery this mode of ligature is especially called for.

The army surgeon should adopt this operation because of its success and rapid application.

To Control Nausea and Vomiting After Anæsthesia.—Dr. J. Torrence Rugh (*Phila. Polyclinic*, February 26, 1898) says: "One of the simplest and most satisfactory methods of controlling nausea and vomiting after anaesthesia, is administration of strong vinegar by inhalation. The explanation of this fact is as follows: The acetic acid neutralizes the free chlorin in chloroform, thus soothing the irritated pharyngeal mucous membrane, which irritation causes the vomiting. In ether inhalation, which is decidedly more irritating to the respiratory passages, this effect is prevented by the vinegar by reason of its pungency, which promotes normal mucous membrane secretions, thus soothes the peripheral nerves of the parts, lessens the irritability of the pneumogastric or its centers, and the reflex condition of vomiting is controlled. Furthermore, vinegar is a restorative and soothing stimulant to the nervous system. It is administered by saturating a towel or cloth with strong vinegar (preferably that made from cider) and holding it a few inches above the patient's face, or hanging near his face. It should be used directly after the anaesthetic has been discontinued, and kept up continuously for several hours. It is a simple, effective method and free from toxic effects.

The Medical Times

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EDITORS:

EGBERT GUERNSEY, M. D. ALFRED KIMBALL HILLS, M. D

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"The value of a thought cannot be told.
We live in deeds, not years; in thoughts, not breaths,
In feelings, not in figures on a dial.
We should count time by heart throbs. He most lives
Who thinks most—feels the noblest—acts the best."

—BAILEY.

THE DUTY OF THE HOUR.

THE closing year of the nineteenth century brings us face to face with duties and responsibilities never known before. The opportunities for effective work in every avenue of science, in every department of labor, have so increased and broadened that they encircle the world and demand the most accurate knowledge, the keenest intelligence and the ripest thoughts. The aims and methods of journalism change and must change to meet the popular needs and keep pace with the ever growing spirit of scientific and energetic progress. National expansion must carry with it, to be enduring, to accomplish the work for which it is alone justified, not alone the power of armies and of fleets, but back of it, giving strength, vitality and active force to it all, the enlightened spirit and the ripened intellect of a nation which on its own soil, in its own laboratories, with its own hands and brains, is solving the great problem of human rights and human freedom. It must not be forgotten that our nation is made up not of a single race, but the blood which circulates through its arteries and veins is a mingling of all nationalities from all the civilized nations of the world. Men of active, cultured minds, of intellectual strength, of expansive, far-reaching thoughts have flocked to our shores to find here that freedom to think and act denied them at home. Mingling together with abundant facilities for work, gaining strength from each other, the best elements of progress in the world have blended into an active living force to form the American nation. The central portion of this continent, vast as it is, stretching from ocean to ocean, can no more confine the energy of its people than a wall of sand can check the rushing forces of a mighty torrent. They *must* be expansive. It is the irresistible law of the world's progress, which no selfishness can resist or hold in check, and that carries with it not alone the freedom of individual rights, the security of life and property in every land which it touches, but all the rich fruits of science and enlightened experience developed and gained through the ages from the cradle of the human race to the present time.

May it not be true that in the closing year of the nineteenth century this composite nation, made up from all nationalities, through the most unselfish war ever waged in all the world's history, is laying its hands in benediction, laden with the rich fruits of human development, upon the very land which saw the birth of our race, the source of the stream which has encircled the world. Ethnographers agree that all the Mongolian varieties of mankind, which include the Malay, the brown and ruddy race, had their origin in the vicinity of the Malay Archipelago, the Philippine islands forming one of its most important groups. There is every reason to believe that this immense archipelago, lying between Southern Asia and Australia, with its thousands of islands, is made up of fragments of two continents which united Asia with Australia. The Malay Archipelego is traversed throughout its entire extent by one of the most extensive and continuous volcanic belts in the world; commencing in the northwestern part of Sumatry, it passes through the entire range of the Philippines. The volcanoes form a continuous chain with seldom more than a hundred miles between them. There are at least twelve active volcanoes in the Philippines alone. On the fragments of this great shattered continent the two aboriginal races, the Malay and the Negrito still exist—the Malay, undoubtedly the same as the Asiatic branch and the Negritoes of the same family as that now found in Central Australia. From this shattered continent emigrants from both races passed, the one to Australia, the other to Asia, and now this great stream of human life, ever broadening and deepening, flows back to its source to enrich its birthplace with the gathered wisdom of ages, and place it in line with that evolution of the human race whose quickened heart throbs are

now felt in every land and in every clime throughout the world.

In this quickened life and its ever-increasing strength, in this expansion of ideas, in this working out step by step the grand problem of human destiny, obliterating evil by bringing all nature in harmony with its laws, there must be, there can be, no pause. Every department of labor, every profession, must do something, must contribute some share to that spirit of progress and development which is now thrilling the world. Old ideas and old plans of work are to a certain extent becoming obsolete. There are broader issues at stake than petty local quarrels, often founded on greed and selfishness. The work of to-day differs essentially from that of a half century ago. And in no sense is this more true than with journalism. With each year the horizon broadens, the light becomes clearer and stronger, and the living journal must catch the radiant rays from every source and reflect them as from a mirror, so that they will be seen and understood by all.

WARD'S ISLAND AND METROPOLITAN HOSPITAL.*

IT seems a long distance in the past since King John in 1215 was forced by the popular will to grant to the people of England Magna Charta, the corner stone of the British Constitution.

Through the long centuries which have passed since then, there has been with the English speaking people a constant evolution of freedom of thought. Slowly it may be, and often with bitter struggle and relentless persecutions, but ever advancing, until now, in the closing hours of the nineteenth century, we are reaping in abundance the rich fruitage of the seed our fathers planted. The past year, so rich in brilliant and lasting results, in altering the map of the world and extending the area of freedom, is but the evolution, the expansion and growth of that freedom of thought, that love of justice and humanity, which has gained its richest results and developed its strongest power upon American soil and in American life.

It was that spirit which spoke with irresistible power in the guns at Manilla and in Cuba. It was God speaking through the ripened thought, the expanded intellect of a great nation, nurtured in the spirit of freedom and holding fast the principal of eternal justice in its action upon human rights.

In all the world where has free, independent thought won such glorious triumphs as upon American soil, and where have the fables of the dark ages, and the crude theories of the metaphysician and philosophers in theology and medicine, been so stripped of their verbiage as here, where they have been brought in contact with the honest research and the scientific studies of the world's great thinkers. The often small grains of truth have been isolated, gathered together and crystallized in the crucible of American thought and adapted to their proper work in the ever-growing and expanding scientific therapeutics of our profession.

Is this American brag of which we are so often charged? Permit me in this connection to quote from the speech of the English Ambassador to France, delivered recently in Paris, at the Jubilee of the British Chamber of Commerce: "The new diplomacy which has come into existence during the past year, which will perhaps end by improving the diplomatists of the old school off the earth, was in a great measure due to the originality of the American mind, ever resolutely watching to improve conditions. America has invariably sent to England the finest representatives of her intellect and culture, and I think we can attribute in no little degree the happy development of the friendly feeling between Great Britain and the United States to the manner in which their representatives performed their tasks, especially in their public utterances on both sides the Atlantic."

It often takes a long time for a great idea or far-reaching principle to obtain such a firm hold upon thinking minds, even in this country, before its voice will be heard and it becomes an irresistible force. There were long years of bitter and relentless persecution, long years of struggle before the great therapeutic ideas of Hahnemann and his magnificent philosophy obtained such a strong hold upon the public mind as to make success in the establishment of a public hospital almost a certainty. And when in only three days' time signatures were obtained representing over four hundred million (400,000,000) of property, asking as a just right for a fair representation of hospital work, and that petition presented to the Board of Charities by A. T. Stewart, the most prominent, perhaps, of all the merchant princes of New York, and William Cullen Bryant, the poet and senior editor of the daily press, there could be but one answer—and the battle was won. A new hospital, the representative of the advanced therapeutics, was added to the great

*At an alumni dinner of the Ward's Island and Metropolitan Hospital we were requested to reply to the toast, "*Our Medical Board.*" As the reply to the toast mentioned some facts connected with the organization of the hospital which it was thought might be of general interest, it was requested for publication in the MEDICAL TIMES.

charities of our city. As there was a Blackwell's Island Hospital under the control of the Department of Charities, we wished ours, its sister, and under the same control, to be called the Ward's Island Hospital. Our hospital was the representative of the so-called homoeopathic school, and yet that name was a sectarian one, and we wished the utmost freedom, as physicians, to think and act along the lines of ever advancing science and experience, wherever those might lead us. The name Homeopathic Hospital was insisted upon, however, and we were forced to submit. The Medical Board was selected from the homeopathic school. It fairly represented the advanced and liberal practice of that school, and yet to a certain extent it was unsectarian, the first really unsectarian hospital ever established in all the world's history. There were no shackles upon the minds of the Medical Board. The broad avenues of science were opened to all and the developments of new truths found a ready reception in every mind.

The new hospital has been called the model hospital of the city, and why? Because it has been peculiarly blessed in most of its superintendents, and especially the present one, with men of marked executive ability, and a medical board who were not afraid to think and act in accordance with the best lights of medical science. The cleanliness, the light, the sunshine, the pure air, the well selected food, the asepsis were a part of the philosophy of Hahnemann, out of which grew his therapeutic law, long before Liston was known, and were to a great extent the secret of the wonderful success of his followers, before those principles were absorbed and became a part of the practice of the great majority of the profession. It was a proud day for us when we entered for the first time our new home, and as we passed through the corridor and from ward to ward, with their long rows of unoccupied beds, realized that they were soon to be filled with *our* patients, and the city, whose servants we were, would pass judgment upon us and hold us strictly responsible for our work. As we passed from ward to ward by the side of those tenantless cots, soon to be filled with the sick and suffering, looking to us for aid, there seemed to vibrate through the air a voice from some unseen source,

"Let there be many windows to your soul,
That all the glory of the Universe
May beautify it. Not the narrow pane
Of one poor creed can catch the radiant rays
That shine from countless sources. Tear away
The blinds of superstition; let the light
Pour through fair windows, broad as Truth itself
and high as God.

"Sweep up the debris of decaying faiths;
Sweep down the cobwebs of worn-out beliefs,
And throw your soul wide open to the light
Of reason and of knowledge. Be not afraid
To thrust aside half-truths and grasp the whole."

And this we have tried to do as far as our ability would permit us, and to make our hospital a little molecule in the mighty stream of freedom and progress which is circling the world.

Have we failed, or is the world a little better for that spirit of freedom, of progress, of clear-cut, incisive thought which you have carried from your hospital experience into broad fields of labor and made a part of your life work and the crown of your success?

MAGNETISM AND IMMORTALITY.

WE are all agnostic, to a certain extent, as to a future intelligent existence of the soul after it has separated from its material envelope. The question, what is the soul and how and why is it immortal, carrying with it the training and development of its earth life into that future beyond the grave, which no mortal eye has ever penetrated, is a question which oftens presents itself to every thoughtful mind. Our belief in the entity of the human soul and its immortality is ingrained in our very being and is a part of our existence. It is not a matter of proof which would be received in a court of law, but nevertheless one of belief so strong that in the minds of the majority of the human race it does not admit of a question.

We have no doubt that at no distant day the entity of the human soul and its immortality will be as clearly demonstrated as any other scientific fact. Possibly the speculation of Mr. F. Reignald Statham, in the November *Westminster Review*, may be worthy of a more than passing notice in the solution of the question. We speak of a magnetic force, but precisely what that force is no one has been able to determine; but whatever it is, the possibility which Mr. Statham suggests, of its being the medium of carrying our individuality into another existence may prove a suggestion in the right direction.

"What becomes of the magnetism," says Mr. Statham, "which is associated with abstract thinking, with the study of intellectual problems, with the appreciation of moral principles? With regard to this question we find ourselves at once in the presence of a probability and a certainty. The probability is that a higher class of magnetic force is associated with abstract thought than with mere ordinary acts of will. The certainty is that this magnetic force is indestructible—that

persists and continues unextinguished. And then arises the question again—What becomes of it?

"The question places us on the brink of an abyss of speculation so profound as to be almost paralyzing. The problem presented to us is of this kind—how to project ourselves, without any pretense of a revelation and in contempt of all *a priori* theories, into the conditions of an utterly unknown, intangible, and extra-physical state of existence. Granting that the force we have dimly revealed to us under the name of magnetism is an extra-physical force—granting, that is to say, that it is energy as distinct from matter—it seems clear that, in spite of all changes in the physical universe, that energy will still persist and go on. It will persist and go on even if all that we know as human should utterly vanish from the face of the universe. Is there, then, any possibility of a footing for our individual consciousness in such an extra-physical existence? Is it possible that there may be in the magnetism associated with abstract thought, with the appreciation of abstract principle, an individual quality or characer that will in some way reconstruct for us an individual consciousness in an extra-physical existence?

"That problem of personality is like the problem of electrical science; it becomes less comprehensible the more we attempt to unravel it. It is no use trying to satisfy ourselves with phrases. Phrases are only labels for our ignorance. This, however, seems certain, that the more we explore the problem of personality, the more does personality seem to depend on inner tendencies than on external acts. It is a matter of experience that men and women who think little tend more and more to resemble each other. Individuality, the strongest witness to personality, gets rubbed out. It is when you get among the thinkers that personality becomes conspicuous, and it is when you get among the thinkers that the question—'Can death be an absolute and final obliteration of consciousness?'—seems to be met by the most decisive negative. Well, then, if we may go as far as this, would it be unreasonable to go a step farther and ask whether this energy, which we call magnetism, which seems so closely associated with thought and with appreciation of abstract principle, may not possibly in some way which is beyond the reach of our present comprehension, form the basis of a conscious existence in a new environment? Might it not be possible to believe, or to hope, that the indestructible energy, which has taken from us a personal impress, may still belong to us; and that through some slow process of realization those who have achieved their highest possibilities in the moral victories or the intellectual advancement which we have agreed to regard as good and desirable for our physical being, will awake to find in truth

"'The sense of self on dawning shores'

marking the commencement of a magnificent and imperishable existence?"

SURGERY FOR DYSPEPSIA.

UNDER this heading, the editor of the *Cleveland Journal of Medicine* points out that Keen, in the able series of Cartwright lectures recently delivered, takes a hopeful view of the operation of gastro-enterostomy as possible means of relief for dyspeptics. The indications for this operation are malignant and non-malignant strictures of the pylorus, to which "in the future a fourth indication may be added, namely, obstinate digestive troubles which have not yielded to medical means." He says that if the stomach does not empty itself, on account of either stenosis of the pylorus or weakness of the stomach wall, its failure to empty itself must be corrected, and this is well done by gastro-enterostomy. He remarks on the likeness between such a state of things in the stomach and retention of contents by the bladder, uterus, and gall bladder, which always causes functional, and later, organic changes. Recent statistics by Carle and Fantino show a mortality of about 4 per cent. The operation in most cases has been performed as a last resort, after the onset of vomiting as the result of practically complete stoppage. Keen thinks it may prove as valuable in preventing years of misery to the far more numerous sufferers from practical stoppage with obstinate constipation and consequent self-poisoning.

The Cleveland *Journal* also refers to some interesting statements by Dr. F. T. Paul, in the *British Medical Journal* of June 4, on "The Surgical Treatment of Pyloric Obstruction." He has had good results from plastic operation on the pylorus. He much prefers this to the stretching of pyloric strictures as practiced by Loreta. How much may be done by operation in some cases for dyspeptic troubles of long standing is well illustrated by his Case IV., which is so striking as to warrant the giving of his short account:

Case VI.—G. D., aged 31. Fibrous stenosis of pylorus; pyloroplasty; recovery. Ever since he was a child of about six he has had to be very careful in regard to food, living chiefly on milk. For several years he has often vomited a large quantity at night before he could sleep, and for the last 18 months has regularly emptied his stomach with a tube and washed it out. Has been steadily losing flesh, and is now very emaciated, as he is above average height and weighs 112 pounds.

Oct. 8, 1896, pyloroplasty was done. The pylorus was very much constricted, but no great thickening or hard-

ness, so that a good band of healthy mucous membrane could be brought into the pyloric orifice. He made excellent progress. On Oct. 24 had chicken and potatoes and rice pudding for dinner. On the 31st was discharged, weighing 126 pounds. In 1897 he was accepted as a first-class life in the Lancashire Alliance Insurance Co., and since remained quite well. Altogether, this proved one of the most satisfactory surgical cases I have ever met with.

Our contemporary adds that, instead of the elaborate estimates of secretion of hydrochloric acid, formation of organic acids, and so on which are of late so much in vogue, an estimate of how well the stomach empties itself would be of immensely greater value to the patient. One test is very simple and ought to be carried out in every dyspeptic examined. After careful percussion over the abdomen let the patient take first the alkaline and then the acid part of a seidlitz powder, dissolved each in a quarter of a tumbler of water. If the stomach is more than normally dilatable its lower border may be made out below the umbilicus, in some cases much below. Then hold a stethoscope on the skin over the epigastric region, press a half dollar on the skin near it and tap it with another coin. The sound when the coins are on the stomach is quite different from that made over the intestine, and the borders of the stomach may be accurately outlined.

MALARIA.

IN many forms of disease we often find that a combination of remedies act better than a single one. This fact has been so clearly demonstrated that even the strongest advocates of the single remedy are seeking in combination a surer and more speedy method of relief and cure. In malaria, for instance, we often find cases where arsenic or quinine seem to be clearly indicated; the action of either one given singly fails to produce the desired effect, but when combined with some other remedy the beneficial result is speedy and lasting. We have often found when cinchona, either in the tincture or some of its alkaloids, though apparently indicated, has failed in producing relief, a combination of cinchonidia or quinine, three grains; capsicum, one-half grain; nux, one-fifth grain, given three times a day, breaks up the trouble. In other cases Warburg's tincture produces the most satisfactory results where single remedies, however carefully selected, have failed. The combination of antikamnia and quinine enter now into the repertory of almost every physician. Dr. Francis Delafield, in a clinical lecture, gives a prescription for malarial fever which he says is very popular with the profession. "The arrangement with the quinine of acetanilid and arsenious acid, in the following proportions, gives very satisfactory results: Quin. sulph. gr. iii.; acid arsen., gr. 1-30; acetanilid, gr. ii." Four of these capsules are taken in the 24 hours. "Why," says Dr. Delafield, "this combination is better than quinine alone, or when arsenic is added, or why adding two grains of acetanilid makes it more efficacious than one-thirtieth of a grain of arsenious acid and three grains of quinine, is a question I cannot answer. I have found it is so by personal experience, and I have found that the adding of the acetanilid gave me such results that I could not get along without it." This experience is that of every physician who finds in his daily work that there can be no iron bound rule in therapeutics which will admit of no deviation. We cannot always define how or why certain combinations produce the desired effect, but until we can understand the why and the wherefore we are satisfied with the results obtained.

THE STUDY OF BRITISH MILITARY MEDICAL METHODS.

THE Surgeon General is very wisely availing himself of the large experience of the Royal Medical Corps of the British army in tropical countries in view of the vast responsibility which will rest upon the medical departments of our army and navy in the medical management of the islands in the tropics which have recently come under our control. Lieut.-Col. O'Reilly and Lieut. Watson have sailed on the "Bay State" for Kingston, Jamaica, to investigate the methods which have been so successful in that island. From there they are to proceed to Havana, where Col. O'Reilly will hold the position of chief surgeon during the occupation. The commission is directed to make a careful inquiry in reference to the methods used in protecting the soldiers from infectious diseases and the care of their health.

TAKING TEMPERATURE BY SOUND.

MANY have been the devices to supply a healthy ventilation and an even temperature in the railroad cars, but success has only been partial, and, to invalids especially, night travel has been attended with more or less discomfort and danger. Now the temperature is able to speak for itself through a kind of telephone in a tone easily understood, so that one man with his ear to the telephone can regulate the temperature of a long train of cars.

The apparatus is like an ordinary electric battery box, such as is used in sick rooms. From one side of the box extends a long insulated wire carying a small coil of bare wire at the end of it. From the other side of the box extend wires which

hold a telephone receiver. The heat or cold acting on the bare coil of wire wherever it may be, causes the electric current to set up a buzzing in the telephone. As the instrument is held to the ear the listener looks at a dial on the battery box marked with figures representing degrees of temperature above and below zero. When the pointer on the dial is turned from one degree to another, as it reaches the degree of temperature where the coil is located, the buzzing stops.

If the pointer marks too low a temperature the operator turns on the steam, and if too high shuts it off. In this way one man with his ear at the telephone and his hand on the steam guage maintains a comfortable temperature day and night through an entire train. We are not aware that this instrument has been introduced to any extent upon railroads, but the principle has been thoroughly tested and its corrections demonstrated in large cold storage warehouses where the temperature of the various rooms is ascertained without opening them.

With well ventilated cars free from dust and kept at an even temperature, the discomfort of travel would be reduced to a minimum.

NOSOPHINE IN CHANCROID AND ULCERATIVE SYPHILITIC LESIONS.

DR. A. H. OHMAN-DUMBSNIT, of St. Louis, gives in a paper read before the Missouri State Medical Association and published in the St. Louis *Medical and Surgical Journal* June, 1898, several cases of chancroid and ulcerative syphilitic diseases treated in the St. Louis Hospital with nosophine with the most speedy and permanent cures. The ulcer is brushed with lukewarm water and dried with absorbent cotton; after this hydrozone is applied to destroy any pus. Nosophine is then applied over the lesion and repeated twice daily till the ulcer is cured. The nosophine is obtained by the action of iodine on solution of phenolphtaline, and is odorless and unirritating. The average duration of the treatment of chancroid was five days and of syphilitic ulcerations seven days.

OSTEOPATHY.

A NEW pathy has recently come to the front and is becoming so popular in the region of its birth as to warrant the establishment of medical colleges. To the question, What is osteopathy? The *Medical Standard*, after a great amount of research and critical medical and philosophical study, formulates an explanation so lucid as to cast such minds as Herbert Spencer and John Stuart Mill entirely in the shade.

"Osteopathy has been technically defined as 'that science which consists of such exact, exhaustive and variable knowledge of the structure and functions of the human mechanism, anatomically, physiologically and psychologically, including chemistry and physics of its known elements, as has made discoverable certain organic laws and remedial resources within the body itself, by which nature, under the scientific treatment peculiar to osteopathic practice, apart from all ordinary methods of extraneous artificial or medicinal stimulation, and in harmonious accord with its own mechanical principle, molecular activities, and metabolic process, may recover from displacements, disorganizations, disarrangements, and consequent disease, and regain its normal equilibrium of form and function in health and strength.'"

A VICTIM TO HIS OWN PREJUDICE.

HAROLD FREDERICK, the celebrated novelist who was attended in his last illness by Christian Scientists, voiced his estimate of the medical profession in his last novel, "Gloria Mundi," where he denounced them "root and branch as impostors and parasites who darkened and embittered human life by fostering all the mean cowardices of small brained people, in order that they might secure a dishonest livelihood by pretending to dispel the horrors their own low tricks had conjured up."

BIBLIOGRAPHICAL.

FIFTH ANNUAL REPORT ON BIRTHS, MARRIAGES, DIVORCES AND DEATHS IN THE STATE OF MAINE, 1896.

QUIZ COMPENDS No. 5.—OBSTETRICS. Landis. Sixth Edition. Price 80 cents. P. Blakiston & Co.

TENTH REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF MAINE. 1896-1897. Augusta, Me. 1898.

NOTES ON DISINFECTANTS AND DISINFECTION. By A. G. Young, M.D., Secretary of the State Board of Health of Maine. Augusta, Me. 1898. Pp. 218. Octavo. A useful little book for reference.

CYCLIC LAW. Its Influence over Man in both Health and Disease. Determining the Sex. Its Influence upon Births, Deaths, etc. Thomas E. Reed, M.D. Middletown, Ohio. 1898. Pp. 167. 16mo. $1.

THE ARCHIVES OF PEDIATRICS enters its 16th year with its current issue, and all this time it has been the organ of the American Pediatric Society. The Archives will continue to be a representative journal. E. B. Treat & Co., New York, Publishers.

DOCTOR THERNE. By H. Rider Haggard. New York: Longmans, Green & Co., London and Bombay. 1898. Pp. 209. 12mo.
A novel written with a purpose, in the author's well-known graphic style—the object to induce the English authorities to replace the law which the anti-vaccinationists have succeeded in repealing.

NINTH ANNUAL REPORT OF THE STATE COMMISSION ON LUNACY for 1896-7 is a large volume including a full report of all institutions under its care, and the fifth annual report of the State's Charity Aid Association. Whatever may have been the objection to the organ-

ization of the State Commission on Lunacy, it has shown by its well considered and admirably conducted work the objections were not well founded. The State is under lasting obligations to the Commission for the intelligence, the honesty and the energy it has shown in carrying out the provisions of the law.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS. A Manual for the Use of Physicians, Surgeons and Students. By Charles W. Purdy, M. D., LL.D Fourth Revised Edition, with Numerous Illustrations. The F. A. Davis Co. 1898.

A work prepared with the care and scientific intelligence which has been a characteristic of each edition of the book under notice will always be welcome to the profession. There is no better text-book on the subject treated and none more deservedly popular.

THE PHONENDOSCOPE AND ITS PRACTICAL APPLICATION. By Aurelio Bianchi, M. D., with thirty-seven illustrations. Translated by A. George Baker, A.M., M.D. Philadelphia: Geo. P. Pilling & Son. 1898.

This little volume shows the great superiority of this little instrument over the old stethoscope, and practically demonstrates its usefulness by cuts showing the various organs in outline. It will be found most serviceable in enabling one to become more proficient in diagnosis of internal affections.

HISTORY OF HAHNEMANN MEDICAL COLLEGE AND HOSPITAL OF PHILADELPHIA. By Thomas Lindsley Bradford, M.D. Philadelphia: Boericke & Tafel. 1898. Pp. 904. Octavo.

This volume was compiled in commemoration of the fiftieth anniversary of this institution and is dedicated to the alumni.

The endeavor has been to describe the advancement of the college from the beginning to the present.

There are 2,372 names in the list of graduates.

We congratulate the author on the success of his work, which cannot fail to interest every friend of the college.

DEGENERACY: Its Causes, Signs and Results. By Eugene S. Talbot, M.D., D.D.S., Fellow of the Chicago Academy of Medicine, Professor of Dental and Oral Surgery, Woman's Medical College, North Western University, U. S. A. With 120 illustrations. London: Walter Scott, Limited. 1898. Pp. 372. 12mo.

This book has been produced with the purpose of reaching educators and parents, and it attempts to lay down general principles for practical purposes, in a way that permits their application to the solution of sociologic problems, which now abound as never before. We commend the book for the objects intended.

A TEXT-BOOK OF OBSTETRICS. By Barton Cooke Hurst, M.D. With 653 illustrations. W. B. Saunders, Philadelphia. 1898.

This work is the result of a practice devoted for the last twelve years exclusively to gynecology in both its branches—obstetrics and gynecic surgery. During this period the author has served in eight of the principal hospitals in Philadelphia as consulting and attending gynecologist and obstetrician. During his whole professional course he has occupied a prominent position as a teacher in clinics and in the lecture room. This text-book is the outcome not only of a large experience, but of a particularly thoughtful and suggestive mind and will be warmly welcomed by the student and the profession.

HUMAN ANATOMY. A Complete Systematic Treatise. By Various Authors. Including a Special Section on Surgical and Topographical Anatomy. Edited by Henry Moons, M. D., and M. B. Gordon. Illustrated by 790 woodcuts, the greater part original and made expressly for this work by special artists. Over 200 printed in colors. Second Edition. Revised and Enlarged. Price $6. P. Blakiston & Co., Philadelphia. 1898.

This immense volume of nearly 1,300 pages, in scientific and literary matter and in the beauty of its artistic and typographical work has no superior in book making. The volume in every respect is beyond criticism.

A PRIMER OF PSYCHOLOGY AND MENTAL DISEASE for Use in Training Schools, for Attendants and Nurses and in Medical Classes. By C. B. Burr, M.D., Medical Director of Oak Grove Hospital for Nervous and Mental Diseases, Flint, Mich.; Formerly Medical Superintendent of the Eastern Michigan Asylum; Member of the American Medico-Psychological Association, etc. Second Edition, Thoroughly Revised. 5½ x 7¾ inches. Pages, ix-116. Extra cloth. $1.00 net. The F. A. Davis Co., Publishers, 1914-16 Cherry street, Philadelphia; 117 West Forty-second street, New York city; 9 Lakeside Building, 218-220 S. Clark street, Chicago, Ill.

The present edition of this little book has added a general guide in the management of cases of insanity, making it a text-book for medical students, and we commend it to the primary class, to which it is only adapted.

A TEXT-BOOK OF PATHOLOGY.—By Alfred Stenzel, M.D., Instructor in Clinical Medicine in the University of Pennsylvania; Professor of Clinical Medicine in the Woman's Medical College; Physician to the Philadelphia Hospital; Physician to the Children's Hospital, Philadelphia, etc. With 372 Illustrations. Philadelphia: W. B. Saunders. 1898. Pp. 848. Octavo. Price, $4.

The author of this book has presented the subject in a most practical form and from the only proper point of view, that of the clinical pathologist. The text in part formed the basis of clinical demonstrations for students, hence prominence is given to pathologic physiology, which makes it more interesting and useful. The subjects are clearly and concisely stated, and put in the best possible form for the use of students. The illustrations are works of art, they are so clearly delineated, and the whole physical part of the work is in Mr. Saunder's best style.

THE PSYCHICAL CORRELATION OF RELIGIOUS EMOTION AND SEXUAL DESIRE. By James Weir, Jr., M.D. Second Edition. Courier-Journal Co., Louisville, Ky. 1897. Pp. 338. 12mo. $2.

The book is divided into three parts as follows: The Origin of Religious Feeling; Phallic Worship; Psychical Correlation of Religious Emotion and Sexual Desire.

The problems discussed are "The Psychology of Hypnotism; Virginity and Effemination; Borderlands and Crankdom; The Methods of the Rioting Striker, an Evidence of Degeneration; Genius and Degeneration; Prophecy and Insanity; Occultism, etc.; The Effect of Female Suffrage on Posterity; Arianism and the Resurrection; Suicide in the United States; Is It the Beginning of the End?"

A most interesting and instructive little book full of food for thought.

The text is based upon historical data both ancient and modern, and its readers should not be confined to the medical profession.

THE SEXUAL INSTINCT; Its Use and Dangers as Affecting Heredity and Morals. Essentials to the Welfare of the Individual and the Future of the Race. By James Foster Scott, B.A. (Yale University), M.D., C.M. (Edinburgh University); Late Obstetrician to Columbia Hospital for Women and Lying-in Asylum, Washington, D. C.; Late Vice-President of the Medical Association of the District of Columbia, etc., etc. New York: E. B. Treat & Co. 1899. Pp. 436. Octavo. Price, $2.00.

The title of this book defines its scope sufficiently. The introductory chapter deals with The Sexual Instinct and the importance of a just appreciation of its influence. Then follows in succeeding chapters: Physiology of the Sexual Life; A Proper Calculation of the Consequences of Impurity from the Personal Standpoint; Woman, and the Unmanliness of Degrading Her; Some of the Influences which Incite to Sexual Immorality; Prostitution and the Influences that Lead Woman into such a Life; The Regulation of Prostitution: Criminal Abortion; Gonorrhoea in both Sexes, with Complications; Chancroid; Syphilis; Onanism; The Perversions. These subjects cannot fail to interest all classes of readers.

The book is a little too technical for the general reader, and contains advice as to treatment which is not desirable, but on the whole, the medical student and the intelligent layman will constitute the bulk of its readers. The

text is well constructed, is easily read, and contains a vast amount of valuable information.

It is a book that the physician may place in the hands of selected patients.

HOSPITAL REPORTS.

MODERN CHALYBEATE MEDICATION.

By Albert E. Mucklow, M.D., of St. Catherine's Hospital, Brooklyn, N. Y.

Although for a long time iron has been recognized as the specific for anaemia, only recently has the profession realized that to the vegetable form alone is due this reputation.

Physicians, following the routine of their predecessors, have prescribed year after year the metallic salts of this drug, with varying and rarely satisfactory results. This has been due to the fact that a palatable, digestible, readily absorbable and quickly acting vegetable preparation, and not a distasteful, indigestible, only slightly absorbable and slowly acting metallic preparation, has been indicated; for the use of the latter in the past has, in the majority of cases, met with ill success for one of two reasons, viz.: either the patient's gastro-intestinal tract was in such a delicate condition that it was unable to digest and absorb the iron in the form in which it was administered, or else its action was so slow—it often taking many months to obtain the desired effect—that the subject of their medication became discouraged and gave up treatment long before a cure had been established. Certainly in this case you may charge the failure to the patient's own willfulness; but even an anaemic's endurance is limited.

Having thus presumed that we have at our disposal a preparation of vegetable iron superior to the old-time metallic salts, we naturally inquire what it is.

Being in no way connected with or interested in any of the pharmaceutical establishments, I feel at liberty to speak favorably or disparagingly of any of the numerous remedies before the profession, according as, in my hands, they have proved useful or otherwise; hence, what I say in the subsequent lines may be understood to be based upon the results of experimental work performed both for the benefit of patients in need of chalybeate medication, and also for my own personal enlightenment.

I had several cases of anaemia under my care a few months ago, and being able to obtain from these a promise to remain within my observation as long as I desired, I determined to try upon them the efficiency of iron in a vegetable form, for I had experienced the same ill success with the metallic preparations in the past as my fellow practitioners. After carefully examining the formulae of the various ferruginous tonics upon the market, I found only one truly vegetable iron compound: viz.: that known by the name of "Hemaboloids," and consisting of a combination of the various iron bearing nucleo-albumens of the vegetable kingdom, re-enforced by bone-marrow extract and beef peptones, antiseptically treated with nuclein. I consequently decided upon this as the medium through which to make the above test. The patients were weighed, their physical and general condition ascertained, and their sputum, urine and blood examined microscopically. They were then given half an ounce of Hemaboloids, three times a day after meals, which dose was increased at the end of the first seven days to an ounce t. i. d. At the termination of each week they were reweighed, their physical and general state, as well as that of their blood, again observed, and their improvement noted. This treatment was continued for five weeks, with results most agreeably surprising to both the patients and myself, and which I think the reader will equally appreciate, by reference to the synopsis of four of these cases given below.

Case I.—A. O., age 48; treatment began June 1. 1898; weight 153 pounds; very anaemic; has hacking cough with considerable expectoration; has a large spot of consolidation at apex of right lung, and sputum contains tubercle bacilli. Appetite very poor; examination of blood shows 41 per cent. hemaglobin, 2,500,000 red and 8,000 white cells. I started him on Hemaboloids June 4, 1898, upon which he continued until July 9. 1898, with the effect of a relief of his anaemia, an increase in his appetite, weight and strength, and the following favorable alteration in the constituents of his blood.

DATE	WEIGHT	HAEM	NO. OF RED CELLS	NO. OF WHITE CELLS	MEDICATION
June 4	153 lbs	41%	2,500,000	8,000	Hemaboloids ℥ 3 t.i.d.
June 18	158 "	49%	3,400,000	6,800	" " ℥ 1 "
July 9	165 "	63%	4 500,000	6,300	" " " "

Case II.—J. D., age 20; has been under my observation for a month prior to being put upon Hemaboloids. He presents a marked anaemia, a variable appetite together with occasional attacks of nausea and vomiting, frequent frontal headache, oedema around the ankles and the evidence of a chronic nephritis in his urine upon examining it microscopically. Gave tinct. ferri. chlo. Mx. T. i. d. P. C., followed by negative results. Began Hemaboloids June 4, 1898. A great improvement took place in his anaemia, appetite, weight, and condition of blood, as observed in succeeding table.

DATE	WEIGHT	HAEM.	NO. OF RED CELLS	NO. OF WHITE CELLS	MEDICATION
June 4	142 lbs.	43%	2,800,000	7,000	Hemaboloids ℥ 3 t i.d.
June 18	148 "	50%	3,700 000	6,000	" " ℥ 1 " "
July 9	152 "	62%	4 500,000	6,000	" " " "

Case III.—M. P., age 49. For three months has been complaining of a persistent cough with profuse expectoration, night sweats, shortness of breath, and a steady loss of weight, amounting in all to thirty pounds. I first saw her on June 11, 1898, when she weighed 140 pounds, had consolidated areas in both lungs, together with a sputum loaded with tubercle bacilli; running evening temperature of 103 degrees and was very anaemic. Examination of blood showed: 45 per cent. haemaglobin; 3,000,000 red cells and 7,500 white cells. She was given Hemaboloids for five weeks, with the result of the return of her appetite, a loss of her anaemic appeaarnce, and the gain in weight and the difference in her blood state noted below.

DATE	WEIGHT	HAEM.	NO. OF RED CELLS	NO. OF WHITE CELLS	MEDICATION
June 11	140 lbs.	45%	3.000,000	7.500	Hemaboloids ℥ 3 t.i.d.
July 2	145 "	51%	3.900,000	6 000	" " ℥ 1 "
July 16	148 "	57%	4.200 000	5,800	" " " "

I did not observe during these five weeks any great change in her pulmonary symptoms, but I think it sufficient that, in the presence of such an active tubercular process, we should be able to check the previous rapid loss in weight and strength and succeed in very perceptibly improving her anaemia and condition generally.

Case IV.—M. C., age 18. Patient first consulted me June 1, 1898. She was suffering, and had been for six months, from amenorrhoea. Physical examination shows signs of a tubercular involvement of her left apex; no cough or other symptom of phthisis pulmonalis, except her general weakness and anaemia, which latter was very marked, her conjunctiva and gums being white. She was treated with Hemaboloids from June 4, 1898, till July 9, 1898, with almost incredible success, as may be seen from the subsequent data.

DATE	WEIGHT	HAEM.	NO. OF RED CELLS	NO. OF WHITE CELLS	MEDICATION
June 4	78 lbs.	41%	2 700,000	8.000	Hemaboloids ℥ 3 t.i.d.
June 18	88 "	49%	3.400.000	7,000	" " ℥ 1 "
July 9	92 "	61%	4.500,000	6 000	" " " "

I consider this my banner case, for in place of a chlorotic invalid weighing 78 pounds, with practically no appetite and lack of menstrual flow for half a year, I had at the end of five weeks a young woman weighing 92 pounds, possessing a good appetite, normally menstruating, with rosy cheeks (this is no fiction), feeling perfectly strong and well, and with the above mentioned favorable change in the condition of her blood. The preceding improvement may appear to be overdrawn and exaggerated, but it is absolutely authentic and truthful, and was watched by several other physicians.

In none of these thus treated did I notice constipation, usually present during the administration of iron.

Besides the above, I have employed Hemaboloids in the convalescence of several typhoid fever cases in whom gastric irritability was unusually marked. They retained it perfectly well, with the result of their anaemia being relieved, and their recovery materially hastened.

Concluding I say: Chalybeate medication has reached its consummation in vegetable iron, in the form of Hemaboloids.

THE VALUE OF WIDAL'S TEST IN TYPHOID FEVER AS ILLUSTRATED IN A SERIES OF OBSCURE CASES.

PENNSYLVANIA HOSPITAL (Service of Arthur V. Meigs, M.D.).

The following cases of typhoid fever illustrate different phases in the course of the disease and the difficulties of diagnosis. They are also of interest because of the use of Widal's test with a view to determine its value in obscure or doubtful typhoid cases.

The first case is that of a young woman 20 years of age, who began to feel generally wretched 18 days before admission to the hospital. The last four days before admittance she had been ill enough to remain in bed. She was wretchedly weak; she had no appetite; she suffered from diarrhoea, and for six days before coming to us she had had a hacking cough. During the eight days she has been here, she has had a temperature ranging between 102 degrees and 104 degrees; a coated and tremulous tongue; rose colored spots on her abdomen, and a dicrotic pulse. There are eight distinct symptoms in typhoid fever which are considered here as cardinal ones: (1) Diarrhoea. (2) Rose colored spots, generally on the abdomen. (3) Hebetude. (4) Coated and tremulous tongue. (5) Epistaxis. (6) Characteristic facies. (7) Dicrotic pulse. (8) Fever. But any one of these may be absent in a given case. There are six of these symptoms well marked in this case. But there is another symptom which is not generally classed among the important ones, but which I consider is almost as much a part of the disease as are the spots or even the ulcers in the intestine. This is the bronchitis, which in this case is noticeable by the hacking cough. In my experience this cough while not invariably present, accompanies the majority of typhoid cases.

The treatment in this case has been the use of five minims of diluted muriatic acid every three hours; when the temperature has reached 102.4 degrees the patient has been sponged every three hours. As to food, the patient gets six ounces of milk every three hours and about one pint of meat broth daily.

We have been making the practice of using Widal's test in these cases; so some of this patient's blood was sent to the laboratory under municipal control in City Hall for examination, and, in this well-marked case of typhoid fever, the report came back that the Widal reaction had proved negative. Here at once is a case where this test is worse than useless, for it might have thrown us off our guard.

The next case is that of a girl of 11 years. She has not been well since taking a heavy cold on Oct. 30. She has felt dull and tired, having had a thin, watery diarrhoea. Since coming to the hospital she has had nose-bleeding, but I do not place much reliance on this symptom in children. It is very common in children even when they are well, and this girl states she had several attacks of this sort last winter. Her tongue is not tremulous; she has had no spots at any time, and hardly any diarrhoea since coming here. The maximum temperature has been 103.6 degrees.

Now it is hard to tell what we are dealing with here in this case. The Widal reaction this time was positive, but from my past experience that weighs nothing with me. But I shall make the diagnosis as that of typhoid fever, as that seems more reasonable than any other, although many of the usual symptoms are absent; but we have the diarrhoea, dicrotic pulse at first, the fever, and the duration of the fever. But such cases of continued fever are difficult to diagnose and our opinions are sometimes wrong, and the patient turns out to have something else.

The third patient I speak of is that of a girl of 10 years. She left school two weeks before coming here and was in bed the second week. She had a bad diarrhoea the last few days before coming here; the stools being yellow and watery. Her maximum temperature has been 102 degrees, but it is now subnormal. She has had no spots, but had nose bleed and also had it before this attack. Her tongue is coated something like that seen in scarlet fever.

The so-called "strawberry tongue" is not to be relied upon as a symptom. It may be present in dysentery, typhoid fever, scarlet fever, or, in fact, in anything. Or it may be absent in anything. It is simply a coated tongue with the papillae enlarged and showing through. This girl's complexion is not characteristic of typhoid fever, and her pulse is not dicrotic. I should call this a case of simple continued fever or irritative fever. The symptoms hardly justify the diagnosis of typhoid, although the case has been reported to the Board of Health as being such. The girl is anemic but comes from the poorer class of people, and probably eats irritating foods of all kinds, and does generally the things she ought not to do. In this case, Widal's test is negative.

The first case was undoubtedly that of typhoid fever. The last two are doubtful and uncertain, even when we get through with our examination and diagnosis. The prognosis is good, and all three are doing well. They get practically the same treatment: Good care, milk diet, sponging, muriatic acid, with variations, if any special symptom is to be met. But people die with all symptoms of typhoid fever, yet present no lesions. In other cases just the reverse holds true. Maybe this last case has more ulcers than the other two. But it is interesting to note that the Widal test is negative in this case.

The last case I wish to show as bearing on this same topic is that of a soldier brought here from Camp Meade. He is 40 years of age, with a negative family history. On Nov. 5 he began to feel badly, and on the 14th he went to the division hospital. When he came here on Nov. 15 his tongue was dry and coated, his breath fetid, and he had the characteristic typhoid complexion. He had the usual hebetude, rose colored spots, dicrotic pulse, and a temperature of 103.8 degrees. He was treated practically the same as the others mentioned, and seemed to be convalescing until Nov. 24, when suddenly, without any apparent cause, he was found to be doing poorly. An examination showed his abdomen was greatly distended, which condition still exists. I did not like his appearance from the first, as there seemed to be something behind the fever. He has been a hard drinker, and an examination of his urine shows the presence of albumen and also of granular and hyaline casts. The inflammation of the kidneys here is then more than the mere passing inflammation accompanying the typhoid process. The kidneys have undoubtedly been damaged in the past by alcohol. As a consequence the patient is in a very bad condition just at a time when he ought to be convalescing. The tympanites is a sign of great danger in this case. We do not have to deal here with a frank peritonitis. He has been given one-quarter grain of opium and one-twelfth grain extract of belladonna every two hours. In addition an enema of a pint of warm water or soapsuds, with the addition of glycerin or other substance to vary it, has been given at intervals. The rectal tube has been passed twice a day. I have never succeeded in drawing off flatus through the tube but use it that its presence may cause contraction and impulse, and thus accomplish the desired result. The actual physical distention in this case is so great as to be dangerous, considering the patient's age and the fact that there is probably chronic degeneration of the kidneys. The case is a very grave one, and I fear a fatal termination.

A specimen of this man's blood was sent for examination by the Widal's test on Nov. 18, and again on Nov. 26. In both examinations the results were reported as negative; a conclusion which is undoubtedly wrong.

Here we had two cases of undoubted typoid fever in whom the test is not only misleading, but worse than useless, while in two cases of doubtful typhoid, it was positive once and negative once. As a consequence of just such results as this, the test has had no weight with me in making up my diagnosis. Specimens were sent more for the purpose of testing the test than for any other reason. They say the test fails sometimes until after the first week of the disease. But no test is of use practically unless it

aids in making a diagnosis or deciding undoubtful cases, and it is just in these doubtful cases where it cannot be depended upon. I felt sure from the beginning that this test was of little value, and am still more convinced of it from later trials I had given it. Common sense goes a great way in deciding upon all matters, and it does not seem reasonable that a man two or three miles away, with a microscope and a drop of blood from a patient with a process such as typhoid fever, should know more of his condition than a physician who has the whole patient and knows all the symptoms surrounding the case. The Widal test has been positive in cases of jaundice, when the blood was sent by mistake.

In view of the results shown in this hospital, I say do not depend on the Widal test.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.

MEDICAL SOCIETIES OF THE HOSPITALS.

Treatment of Lymphadenoma by Intraganglionic Injections of Camphorated Naphthol—M. Fernet.—Patient a girl of 22 years, affected with lymphadenoma of a cervical gland, of the axillary glands, with vascular compression and oedema of the arm, also of the mediastinal glands—dyspnoea—and an intra-rachidian lymphadenic tumor compressing the medulla in the lumbar region (paraplegia). Thirteen injections of camphorated naphtol were made in the glands of the neck, which produced a marked diminution of their volume. An injection was forced into the mediastinum, followed by brownish expectoration, having the odor of camphorated naphtol, and doubtless a gland necrosed by the injection and opening into the bronchi. Autopsy showed that the glands had undergone a necrosis of their central parts. This necrosis is useful, and can produce the disappearance of the diseased gland. One of the lymphadenic glands that was not treated was put under the skin of a guinea pig, and from it sprung a tumor of the same nature that developed rapidly and had ganglionic characters.

Curability of Acute Meningitis.—M. Dalche relates a new observation of curable meningitis. A woman of 45 years, taken suddenly with cephalalgia and visual troubles; in a week there followed an ictus, with semicoma and left hemiplegia. Kernig's sign was marked; diagnosis made of acute meningitis, confirmed by M. Netter; patient did not die, and two months after presented classic hemiplegia. The daughter in turn was taken with vague signs of an infectious disease, followed by phenomena of myelitis (progressive paraplegia, rapidly becoming complete, without pain or sensory troubles). While there were two months between the appearance of the morbid phenomena in mother and daughter, it must be admitted that the same cause of contagion existed in both; it cannot be accepted as a simple coincidence. M. Rendu.—It should be noted that the duration of incubation in cerebro-spinal meningitis is very short, and does not exceed more than a few days. In the case of M. Dalche the second patient was taken two months after the first, and such are not the usual conditions of contagion. M. Netter accepted the idea of M. Dalche; there was every probability that the contagion in both was the effect of local contamination. The two manifestations differed: in one there was meningitis, and myelitis in the other. It is interesting here to recall the observation of Schultze, in which a child was taken with slight pains in the cervical column, with fever, and signs of acute anterior poliomyelitis (paralysis of two upper limbs, followed by atrophy, as in infantile paralysis); a lumbar puncture voided a liquid containing meningococci. There had been no pains in the head, no redness of the nucha, no meningeal vomiting, indeed no symptoms of meningitis. It was a cerebro-spinal meningitis in which the microbes had expended their action, not upon the meninges, as is the rule, but upon the deep nervous substance. So the same agent, infecting the rachidian canal, sometimes causes meningeal troubles, and sometimes myelitic phenomena with but slight meningeal participation. As respects the processes of contagion in this disease, we can only advance hypotheses. It is agreed that the pathogenic microbe is found in the mouth and nose of the patient, and therefore the products of expectoration may be hurtful. On the contrary, it is a rare thing for cerebro-spinal meningitis to begin by rhinitis or angina. In 37 cases during this year M. Netter has investigated with the purpose of determining if the introduction of the infection occurred at the above points; but he has found no symptomatic indications except in a very few instances.

THERAPEUTICS.

Héroïne.—Héroïne is a new salt of morphine which will be of great service in therapeutics, according to the opinion of M. Floret, who has experimented with it in 60 cases. It is very useful in controlling cough, from whatever cause; has been tried in 25 cases of confirmed tubercle, with complete success in 21. Same results in acute or chronic bronchitis, pharyngitis, laryngo-tracheitis, and asthma. Dose from 5 milligr. to 1 or 2 centigr., repeated three or four times daily, according to gravity of case and particularly to age of patient. Well tolerated by digestive organs, no vomiting nor constipation, nor ill effects of any kind. In 60 patients who have used héroïne only one complained of slight vertigo.

Coronilline.—M. Bardet analyzed a work of M. Maramalgi, privat docent of Naples, upon coronilline, the active principle of coronille, which has already been investigated by MM. Pouchet, Grey, etc. In animals it increases arterial pressure, determines variations of tension and cardiac arythmia, augments temperature slightly at first; afterwards produces progressive depression. When injected under the skin it produces vomiting, which, in the dog, is not provoked by its administration by the stomach. It slightly diminishes the quantity of urine, and is rapidly eliminated by the kidneys and stomach; death is caused by cardiac paralysis. M. Pouchet stated the difference in the efficacy of coronilline extracted from the "coronilla varia," and that from "coronilla scorpioides." M. Crinon observed that as coronilline is rapidly eliminated in five or six hours, it is unlike digitaline, which is eliminated very slowly. M. Pouchet assimilated the physiological effects of coronilline and digitaline, but recognized the great difference of elimination.

Asaprol in Typhoid Fever.—M. Fereino, of Sao Paulo, Brazil, addressed a communication upon the treatment of dothinenteritis. He insists upon the inutility of insoluble antiseptics in typhoid fever. Naphtol and benzonaphtol sometimes form veritable intestinal calculi. He recommends as an internal antiseptic small doses of calomel, and has also obtained excellent effects from asaprol (monosulfuret of naphtol), the use of which shortens the duration of typhoid fever. Asaprol should be given in dose of 1 to 2 grams in potion daily, or powders every two hours. In case of diarrhoea, associate it with chalk or the salicylate of bismuth. M. Fereino affirms that asaprol has an agglutinative action upon the cultures of the typhic bacillus, as demonstrated by his compatriot, M. Mendoca.

CONGRESS OF GYNECOLOGY, OBSTETRICS AND PEDIATRY AT MARSEILLES.

M. Laroyenne said there would be many useless laparotomies if all the women affected with hematocele were operated on. He advised a vigilant abstention in all hematoceles of slight importance. It was necessary to be ready to interfere, not so much on account of the suddenness of hemorrhage as of its continuance.—M. Martin, of Rouen, asked for information respecting marsupialization of the sac; what is to be done when there are adhesions? Friability is an obstacle to marsupialization. He cited a case in which he met with great difficulties before he could complete his operation.—M. Kirsac, Budapest, presented two cases of extra-uterine pregnancy, one of normal pregnancy, and a few weeks after the patient was operated upon for an extra-uterine pregnancy. The other had a tubal pregnancy operated on, and an annex removed; soon after there was another tubal pregnancy on the other side.—M. Jonesco declared himself to be a laparotomist and not a vaginalist, very often the tubes are diseased before tubal pregnancy exists, and that in cases where there had been rupture at the moment of operation, he was able, thanks to laparotomy, to recognize a diseased tube and to remove the two annexae. Partial operations are not made by the abdomen; he condemns the abdomino-peritoneal drainage advised by M. Kirsac.—M. Solorieff, of Moscow, asked if biectopic children are well formed.—M. Pozzi said that if hemorrhage is feared the abdominal operation should be performed. If there is a

tumor to be removed, operate by the vagina or median or lateral laparotomy, according to the case.—M. Segond responded to M. Kirsac that he was absolutely opposed to the principle of always removing the two ovaries. He assured M. Solorieff that he knew of two superb ectopic children; not so in the majority of cases; far from it; but it occurs. He also subscribes to the bacteriological researches of M. Magnin.

The Auto-Intoxications of Pregnancy—M. Bouffe de Saint Blaize.—First, Normal pregnancy originates a superabundance of poisons, or of special poisons. Whether there exist special poisons of pregnancy or not, one certain fact remains, that there is a more pronounced normal auto-intoxication during pregnancy than in the non-gravid state. Second, That there is a special condition of the organs and of the blood which favors this auto-poisoning. The blood contains fewer red globules. There is a hydremia, and hence anemia from the beginning of pregnancy. In the anemic it is well known, that the uro-toxic coefficient is greatly increased, albumen diminished, as also hemoglobine and fibrine. The heart, without being hypertrophied, must accomplish very much more work, and as the blood has less perfect respiratory power, the capacity of the lungs is diminished. Intestinal function is delayed. Women are subject to constipation, and consequently there is retention and stagnation of putrid matter. Dyspepsia is frequent, accompanied by abnormal fermentations. Kidneys: According to certain authors, intimate connections exist between the uterus and the kidneys. Leyden even admits a fat gravid kidney. This is not proved, but it is certain that the kidney is compelled to do an immense amount of work.

The urine: The bladder and the ureters are nearly always compressed, and from this fact albuminuria is said to be produced. In the urine there is a diminution of urea, uric acid, phosphates and creative. Liver: In 1856 Tarnier and Blot drew attention to a fatty degeneration of the liver, during pregnancy, which Dulpian confirmed. Tarnier supposed that this fatty condition was physiological, and connected with pregnancy, and not a septicemia. De Sinety associated it with lactation. The investigations of Tarnier and Blot were evidently made when the pathological anatomy of infections and poisonings did not exist, but septicemia certainly existed more than now, and all of Tarnier's examinations were of women affected with septicemia. Since 1891 I have examined 52 livers of women dead from the diseases of pregnancy, 42 of whom were eclampsic, and have met the lesions so often described, but never the fatty. So the conclusions of M. Tarnier are to be questioned, and the lesion he describes is secondary and not normal. If the liver is normally fat during pregnancy, all pregnant women would be sick and very sick, which happily is not the case. What happens to a pregnant woman when one or the other of her organs of defense becomes inefficient? Two different conditions should be distinguished, one in which the organism presents no defect, all the organs being intact functionally; the other in which there existed previously to the pregnancy some disease of the liver or kidneys. In the latter case the accidents which occur may be attributed exclusively to the liver; but this intoxication may present itself in very different forms, accordingly as one or the other poison predominates, or as the poisoned organism furnishes a point of the least resistance by heredity, by a previous disease or by some morbid disposition. Without clinical investigation, examination of the urine will reveal interesting facts; let it be understood that at this period it contains no albumin. Chauffard has noted that the quantity of urea diminishes considerably, and this progressive diminution is a most valuable element of diagnosis. It is, says Jeanselme, the measure of cell alteration, and it may happen, says Hanot, that hepatic disease manifests itself only by hypoazoturia (it is highly necessary to ascertain the total quantity of azote in the urine), by albuminuria, by alimentary glycosuria, or by the modifications of the biligenic or the chromatogenic function; by the abnormal production of urobiline, of red pigment, producing either the acholic pigment of Hanot or the polycholic pigment of Chauffard. M. Cassaet shows too, at this period, the urinary excretion of a large quantity of biliary salts; sometimes, too, the disturbed hepatic cell gives birth to products as yet chemically undetermined, but which probably cause the itching which may precede hepatic disease. Hanot calls these phenomena, prehepatism; Andrae was also familiar with this premature pruritus. When the liver is incapable of transforming uric acid into urea, the quantity of the former is greatly increased; at the same time there is a diminution of sulfo-conjugate acids. The extractive matters, leucine, xanthine, hypoxanthine, etc.—which are degrees of oxidation of the albuminoids—appear in the urine and increase its poisonous qualities, alimentary glycosuria may be a good diagnostic sign, although, according to Rogues, it exists in 16 per cent. of healthy subjects. Hanot says that if it coexists with urobilinuria and hypazoturia, it is an important semeiological element. Urobilinuria and uricemia equally appear and increase the toxicity of the urine—Hayem. Indican also will be found in certain cases of very marked hepatic insufficiency. Bar, Mercier and Menn have shown that the urine often contains a notable quantity of peptones in the days preceding an attack of eclampsia; as we know, urinary toxicity diminishes during pregnancy. It increases when hepatic insufficiency occurs, and diminishes when the kidneys, in their turn, fail. Roger says, with reason, that the diminution of the uro-toxic coefficient after an increase is a bad sign, because it is symptomatic of renal insufficiency supervening in the course of hepatic insufficiency, and Tarnier and Chambrelent have shown a diminution of this coefficient during eclampsic attacks; the serum becomes more toxic, and its toxicity is generally in indirect relation with that of the urine. According to Roger, if sulfhydric acid pure be injected by the rectum, the gas is completely retained if the liver be normal, and if, on the contrary, there exists even a slight insufficiency, paper is immediately blackened in the mouth; finally albuminuria supervenes when the insufficiency is fully established. Treatment: When a suspicion of toxhemia exists during pregnancy, a milk diet should be rigorously imposed; the rest of the treatment should be based upon the functional activity of the emunctories, the intestines, kidneys, lungs and skin, and frequent drastic purgation has no ill effects in pregnancy. Premature delivery will be indicated in all cases in which medical treatment is impotent, and if the phenomena of poisoning persist or increase in spite of its strict employment, this as much in the interest of the child, if it be viable, as of the mother. During the nervous attacks, or preceding them, give chloral in large dose, and sometimes chloroform in anesthesic quantity. As regards chloroform, it might be questioned if it may be employed freely in consideration of its action upon the urinary organs. The secret of its harmlessness is in the antagonism existing between anesthetic poisons and the convulsive poisons to which the woman is subject. It is necessary to neutralize one by the other, and consequently to give such doses as would be toxic in a healthy organism; moreover, chloral would have a more dangerous action than chloroform, which is largely eliminated by the lungs. Chloroform in anesthetic quantity and chloral in massive doses, as advised by M. Pinard, if they do not purify the blood, will have the effect of suppressing the convulsive conditions, which are often secondarily the cause of death by the increase of pressure inducing cerebral or meningeal hemorrhage, or peritoneal inundation from hemorrhage of the liver from the rupture of the capsule of Glisson.

Antistreptococcic Serum in Puerperal Infections—M. Eustache (Lille) has employed injections of the above in puerperal infections, and in four grave cases the results have been discouraging. In others it seems to have been inferior to the regular treatment, injection, curettage, etc., and as respects its preventive employment, it should not be advised, as asepsis and antisepsis produce many deliveries without accident. M. Jacob, on the contrary, read an observation in which the serum appeared to have effected a cure. M. Wallich (Paris), in the report which I made on this subject at the Congress of Moscow, based upon experimental facts and trials upon women, I have reached a conclusion respecting the harmlessness of the serum as a preventive. As respects its curative action, I am not confirmed for or against, and the few facts stated by M. Eustache do not induce me to depart from that reserve. To solve the question, it would be necessary, on the one hand, to be able to make in each case a diagnosis of bacteriological infection, and employ the serum "ad hoc." M. Prof. Pinard.—M. Eustache has made upon the subject of the genesis of puerperal infection, an assertion which, in cases of this kind, would have the effect of rendering the physician in attendance personally responsible for the situation; this should not be his thought. We have

certainly reduced puerperal infection to infinitessimal proportions, but it still exists. Then why should we not endeavor to cause it to disappear by preventive injections of serum that are harmless? In my service these injections are made, not upon all women, but those of whom there is the least apprehension. There are injections that are rather precocious than preventive, and the results of this practice will be given at a future date. For the present, I will simply state that since this plan has been followed, there have been fewer curettages. Prof. Livon (Marseilles).—The difference in the therapeutic results obtained may be due to the difference in the action of the serum according to the kind of streptococcus employed. As has been said by M. Wallich, the question can only be solved by making a bacteriological diagnosis in each case.

Treatment of Puerperal Phlebitis of the Lower Limbs by Fixed Abscesses—Prof. Fochier (Lyons).—Three cases have shown me the good results obtained by fixed abscess in puerperal phlebitis, and I would ask that you, in your turn, would try this most excellent method. I recommend it in all cases of the above affection, even when the general condition is good; for however mild the "phlegmatia alba" may appear to be, it cannot be affirmed that it will not give rise to those arthrites and lasting vedemata that constitute veritable infirmities. Choose the place for making the injection; the point of election is an equal distance from the spine of the ilium and the false ribs. If the puncture be made deeply—juxta-aponeurotic, the pain is but slight—have no fear of repeating the abscess, eight or ten times if necessary. In all cases it is not necessary to incise one before the other is in process of formation. M. Pinard.—If M. Fochier would say to us, "Since such and such a time, I have treated all my cases of puerperal infection by fixed abscesses, and from that moment the mortality has diminished so much in my statistics," then we would all follow in the path he has pointed out. Until then I shall remain faithful to injections of antistreptococcic serum, thanks to which the grave accidents of "phlegmatia alba" have become very rare in my service.

Pyelo Nephritis of Pregnancy—M. Vinay (Lyons).—This disease manifests itself by local symptoms, such as right lumbar pains extending to the fold of the groin, urine albuminous and purulent, movable kidney possible, bladder not painful on pressure or internal exploration, with preservation of its ordinary capacity. General symptoms. Fever with rigors, cephalalgia and vomiting. The disease appears only in the second half of pregnancy; then the right ureter may be compressed by the gravid uterus. Bacteriological researches have demonstrated the existence in the urine of the coli-bacillus, and more rarely the streptococcus. Prognosis favorable in spite the grave manifestations of the beginning. Treatment: Repose in bed, milk, laxatives and the use of mild alkaline waters. M. Lop (Marseilles).—Pyello-nephritis may sometimes result from blennorrhagia, and in such cases the gonococcus would be found. M. Vinay.—I have never observed an infection of this kind, but rather believe that it occurs through the blood currents because of the slight resistance of the right renal surface to the pressure of the pregnant womb.

The Proper Method of Catheterizing Women.—Dr. L. B. Allen (*Medical Council*) emphasizes the folly of allowing esthetic considerations to override safety in this operation, and calls attention to the fact that the exposure of a woman's genitalia is a trifling matter compared with the great danger of communicating septic infection to the bladder, which is consequent upon the old-fashioned attempt to catheterize without exposure under the bedclothes. He says substantially: Cleanse the hands, catheter and patient. Carefully expose the genitalia, and with the fingers of the left hand separate the labial folds. After saturating a small pledget of absorbent cotton in a (weak) carbolized solution, or other suitable antiseptic, thoroughly sponge the vestibule and around and over the meatus. Now, being able to see, you will not have to touch the point of the catheter or the surrounding tissues, but can insert it directly into the meatus. This will prevent as much as possible the danger of the introduction of germs into the urethra and bladder, and may thereby save both patient and physician subsequent trouble.

CORRESPONDENCE.

APPENDICITIS STATISTICS.

To the Editors MEDICAL TIMES:

On page 370 of the MEDICAL TIMES for December, 1898, Dr. W. W. Keen, of Philadelphia, is quoted as having said at the Denver meeting of the "A. M. A.": "I dispute the assertion that through surgical operations all but two per cent. of appendicitis cases can be saved. I challenge any operator in this room to take one hundred well persons and operate upon them without killing more than two per cent." This quotation, which comes via *The Critique*, probably misrepresents what Dr. Keen had intended to say. I judge that it is a harmful misrepresentation for two reasons. In the first place a surgeon of Dr. Keen's standing in the profession is careful about making statements without knowing whereof he speaks, and in the second place it would indicate that his own statistics are not very good, and that he should devote a month to the study of abdominal surgery under the personal supervision of some competent man.

Concerning the matter of a two per cent. death rate in operations upon healthy men, Doctors Bull and Coley have recently published a list of over eight hundred hernia operations, with a mortality rate of less than one per cent. Dr. M. M. Johnson has published a report on one hundred consecutive unselected appendicitis operations, with a mortality rate of only two per cent. I have published a report on one hundred consecutive unselected appendicitis operations with a mortality rate of only two per cent., and a post-operative hernia rate of only two per cent. as far as I could trace after history. In my list there were thirty-eight cases with abscess and various grave peritoneal complications, and most of the remainder of the cases had adhesion complications. Of the two deaths in the list one patient died from suppurative nephritis, because the appendicitis abscess had ruptured into the ureter a short time before operation. The other patient died from general septic peritonitis, far advanced at time of operation, and in a patient who was not managed according to my usual method for stopping general septic peritonitis.

Those of us who have tried to make our appendicitis surgery creditable do not care to have our statistics questioned, because we feel that progress is not made in that way. We wish to have our records examined critically, with the result of an adoption of our methods by men who intend to have equally good statistics. Shortly after my report upon one hundred consecutive appendicitis operations was published, a Dr. Savidge wrote to the *Medical Record* stating that any one who knew how such statistics were obtained would not be elated. He stated that they were obtained by refusal to operate on cases that afford great risks, and that such patients were allowed to die unaided in the interest of good statistics. There was another man whose influence in the profession is destructive rather than constructive. As a matter of fact I had operated in every acute appendicitis case that I had seen during the time covered by my reports, excepting two patients who were dead on my arrival at the bedside. Dr. Savidge knew nothing whatsoever about me or my work, and yet he was willing to commit a blunder in the interest of malice as opposed to progress in methods for saving human life.

Those of us who have shown creditable statistics in appendicitis surgery have been enabled to do so because we dropped from our technique the methods which have a death rate of their own. The results of long incisions, multiple incisions, gauze packing, iodoform gauze packing, working by sight, protracted operation, and many other unnecessary inflictions cause the physician to hesitate before turning his appendicitis cases over to the surgeon. But these resources, which have a death rate of their own, are not favored by men whose statistics are good. If Dr. Keen or any other surgeon cannot lower his death rate in appendicitis operations to a fraction of one per cent. in internal cases, to about two per cent. in unselected cases taken as they come, and to about five per cent. in cases with abscess or septic peritonitis or both, then in the interests of society he should immediately place himself under some competent instructor. That is the reason why I assume that Dr. Keen was misrepresented in the quotation from the speech that he is said to have made at Denver.

ROBERT T. MORRIS, M.D.

49 West Thirty-ninth street, New York, Dec. 17, 1898.

SOME CONSIDERATIONS IN THE TREATMENT OF THE DISEASES OF WOMEN.

No special field in medicine has been cultivated more assiduously than that of gynecology. Our journals teem with gynecological contributions, yet the vast majority of these deal with the surgical aspect of this subject, in which the general practitioner can have but little interest. If one were to judge from the literature, indeed it would seem that there is no longer such a thing as medical gynecology, and it is this predominance of operative methods in the management of diseases of woman which must serve as my apology for venturing to make a few remarks on the medical treatment of these cases.

In view of the fact that the practitioner has an opportunity of treating many of these patients before they come under the observation of the specialist, it depends often upon the thoroughness of his treatment whether resort to the knife will afterwards be necessary. Let us take a familiar instance. A woman consults her physician for a troublesome vaginal discharge. If he looks upon it as a trivial ailment, considers it unnecessary to make an examination, prescribes an astringent injection, what may be the consequences? Endometritis, salpingitis, pelvic peritonitis may originate in this manner. On the other hand, if he realizes that a failure to determine the exact condition may be attended with the most serious results, his treatment may prevent the extension of the morbid process to the uterus, tubes and ovaries. In conformity with the teachings of some modern authorities, it seems fair to me to assume that in the majority of these cases there is an element of infection which cannot be safely disregarded. Frequently, perhaps usually, the infection is of gonorrheal character. In fact, as most general practitioners, the writer included, are not in the habit of making examinations for gonococci, it is advisable to treat these patients as if gonorrheal infection were actually present. Of course, by this it is not to be inferred that there are not many cases of non-gonorrheal character, but such a line of treatment should be adopted only as a precautionary measure.

It is an important and interesting problem, which yet awaits a satisfactory solution, whether in most instances the infection has not already invaded the uterus before the patient presents herself for treatment. As a rule, this question must be answered in the affirmative from the gynecologist's standpoint. On the other hand, the family physician, who often has an opportunity of seeing the case at a much earlier period, is less likely to meet with uterine involvement. All of which serves to emphasize the statement made above, that he is often in a position by timely and well directed treatment to prevent much serious diseases of the uterus and appendages.

A case in point may be of interest. Some years ago the writer was consulted by a married man who, during his wife's absence in the country, had contracted gonorrhea, his first attack. On close questioning he confessed, with much reluctance, that since his wife's return he had connection with her, and that he feared she was also suffering from the disease. In extenuation of his brutal conduct he said at the time he cohabited with his wife he had no evidences of gonorrhea, except an itching about the glans penis and a slight moisture at the meatus. It would therefore appear that he infected his wife at the beginning of his attack, which at the time of his first visit to me was of one week's duration. The following day his wife came to me for treatment, and examination disclosed a typical gonorrheal vaginitis and urethritis, the mucous membrane of the vagina being red, swollen and eroded and covered with a foul yellowish creamy secretion. A specimen of the latter was examined microscopically and found to contain gonococci, thus confirming the diagnosis.

What complicated matters considerably in the treatment of this case was that the patient also had some prolapse of the uterus, which, however, had never given her any trouble. Having impressed upon her the importance of strictly following the directions, she was told to take as much rest as possible, and to flush out the vagina morning and night with two or three gallons of warm water by means of a fountain syringe. A nitrate of silver solution, 4 per cent., was thoroughly applied to the vulva and vagina with a cotton swab, and, as the patient was able to report only at long intervals, she was ordered a box of Micajah's Medicated Uterine Wafers, and told to introduce a wafer as far up the vagina as possible after each irrigation. At her next visit—more than a week after—I was agreeably surprised to find that the patient's condition had much changed for the better. The evidences of the inflammatory process were rapidly subsiding; the discharge was much less profuse, thinner and less purulent. The treatment was therefore continued and a permanent cure obtained at the end of four weeks. Although several years have elapsed since then, the patient has not manifested the slightest evidences of uterine disease.

This must be attributed in great part to the promptness with which the treatment was initiated. Had not attention been directed to the undoubted gonorrheal character of her disease by the husband's confession, and thus an opportunity afforded me of treating the case in its early stage, it is probable that the woman would have waited before consulting a physician until such a time when the infective process had already invaded the uterus, tubes and peritoneum.

In the treatment of gonorrheal vaginitis I place great faith in copious vaginal irrigation. No less than two gallons of water, and better still three or four, should be used at each sitting. The temperature of the water should be slightly over 100 degrees F. at the commencement of treatment, but later be increased to a degree compatible with the patient's comfort. It is of great importance that in taking the injections the patient should lie flat on the back with the legs drawn up against the abdomen and the hips slightly raised by means of a pillow. A rubber sheet spread beneath her, with the lower end gathered up in a fold and placed in a pail will prevent the couch or bed from becoming wet.

After the irrigation it is now my custom to direct the patient to introduce a Micajah Medicated Uterine Wafer as high up in the vagina as possible. Formerly it was my habit to prescribe powders of alum and borax or zinc sulphate to be added to the water of the douche, but since using the wafers I find that much better results can be obtained more conveniently and agreeably. The wafers have marked astringent and antiseptic properties, and yet are perfectly unirritating. They therefore assist the action of the hot douche in contracting the vessels of the vaginal mucous membrane, relieving the engorgement, promoting the absorption of exudates, and arresting the secretion, while by reason of their powerful antiseptic qualities they destroy the cause of the inflammatory process—the gonococcus. In view of the fact that the wafers dissolve slowly their action is exerted for a prolonged period and is never marked by an undesirable degree of intensity.

There are two other conditions which are often seen by the general practitioner at a time when by early resort to appropriate treatment serious and far-reaching consequences requiring the services of the specialists may be avoided. I refer to perineal lacerations and the so-called "ulceration of the uterine neck." Lacerations of the perineum after childbirth are so common that they do not receive as much consideration as they deserve. Most obstetricians are agreed that if the tear is not too deep and extensive it is of great advantage to suture it right after childbirth. This has been my custom and I have rarely found a patient who would object to it. At that time the sensibility of the parts is much reduced, and the sutures can be inserted with but slight pain. Union takes place promptly as a rule, if care is taken bring the edges of the tear in accurate apposition. Even small lacerations, however, which require no suturing, demand careful attention, for in these cases there is always a chance that the wound may become infected and thus give rise to mischief. To promote granulation it is my practice to dust the laceration with boric acid and insert a uterine wafer into the vagina. In this way infection is prevented, and cicatrization occurs more promptly and completely.

Laceration of the cervix uteri is another condition that the practitioner often has an opportunity of observing and treating at a period before the more or less serious sequelae have had time to develop. Of course, I am not referring now to extensive tears, which should be repaired by operation as soon as possible, but to the small lacerations which are so commonly met with after childbirth. I do not think that a physician is doing his full duty to the patient if he neglects to inspect the os during the early puerperal period. If a laceration be found it should be covered with some antiseptic dusting powder to prevent

it from becoming infected. The infection starting in such a lacerated cervix tends in the course of time to involve the mucous membrane of the uterus and the uterine appendages. It is therefore advisable in these cases to keep the laceration as aseptic as possible and to encourage granulation. For this purpose the uterine wafers referred to have served me well by reason of their antiseptic and cicatrizant qualities. One of these wafers should be pushed up against the cervix every day or every other day, and I have found their use extremely cleanly and convenient when compared with a tampon. The same treatment in connection with applications of iodine, and glycerine or ichthyol, proved very serviceable in the so-called ulcerations of the neck of the womb, a condition in which the cervical mucous membrane is red, swollen, thickened and everted. While a radical cure without operation is usually impossible in these cases, the wafers have an undoubtedly beneficial influence by relieving the congestion and inflammation.

It is not my intention here to discuss the treatment of endometritis, but simply to point out that in these cases also the practitioner sometimes has the advantage of encountering the disease before it has invaded the tubes and peritoneum, while the specialist usually sees the patient when such invasion has already occurred. Prompt and energetic treatment should therefore be the watchword. Much can be accomplished by measures which will deplete the uterus, relieve the congestion, and establish more normal circulatory conditions. Copious vaginal douching, as described above, is a procedure of great value; the systematic use of the wafers already referred to is no less important. It must be remembered, however, that in many cases we have to deal with an infective process commonly of gonorrheal character, and that the objects of treatment here are to destroy the germs of infection and then remove the lesions produced by their presence in the mucous membrane. To accomplish this it may be necessary to resort to intra-uterine procedures which the practitioner is unwilling to undertake, and in that event the case should be referred forthwith to the specialist, as time is an element of the utmost importance in the prognosis, and any prolongeed delay will materially impair the chances of a permanent cure without serious operative intervention at a subsequent period. P. HALSTEAD FAIRCHILD, M.D.

New York, December, 1898.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine, New York, Etc.

Urotropin.—The Journal of Cutaneous and Genito-Urinary Diseases, November, 1898, contains Dr. George E. Brewer's article, entitled, "Some Observations on the Use of Urotropin in Pyuria" and Dr. R. W. Wilcox's report "A New Urinary Disinfectant" is published in *The Medical News* of Nov. 12th, 1898.

At the meeting of the Boston Society of Medical Science Oct. 18, 1898, Dr. M. W. Richardson read a paper on the value of Urotropin as a Uruinary Antiseptic with special reference to its use in typhoid fever. He concluded that for the removal of typhoid bacilli from urine, Salol is much inferior to Urotropin, which in 10 grain doses, three times daily, remove the bacilli permanently. This we quote from The Philadelphia Medical Journal, Oct. 29th, page 887. There has been produced literature on Urotropin from foreign medical journals as early as August '95 and October '96, it is only of late that the American practitioners have convinced themselves of the great value of Urotropin as a urinary antiseptic. We are told that without an exception, every physician heard from who has used Urotropin has expressed his great satisfaction with the same. We quote Dr. Stewart McGuire of Richmond, Va., in which he says:

"I cannot help writing to tell you personally how much pleased I am with Urotropin. It has acted marvelously in several cases."

We also find in The London Therapist, Oct. 15, 1898, an elaborate report by T. Gordon Kelly, M.A., M.D., covering several carefully selected cases. One case was of fifteen years standing, and was complicated with haematuria. In conclusion he says:

"The points I wish to emphasize in this case are, the extremely chronic character of the case, the failure of all other drugs, both astringent and antiseptic, to benefit the case in the slightest degree, the rapid beneficial effect of the Urotropine, and the fact that for nearly five months the patient took the drug without the least unpleasant effect.

In prescribing Urotropine, my experience teaches that firstly the reaction of the urine should be discovered, and if very acid a little citrate or acetate of potash, or if very alkaline a little dilute mineral acid should be given in addition to the drug.

"In conclusion, I may say that, in my opinion, we have in Urotropine the most thoroughly reliable urinary antiseptic and astringent, and the one nearest approaching to specific for cystitis and allied affections."

The practical therapist (Cleveland Med. Gazette) rarely experiences trouble in administering iodide of potash to people with sensitive stomachs; but, unfortunately, such cases do occur, and with the very people where we desire an active aand efficient iodine medication. Some of these stomachs seem so sensitive to the most minute dose of iodin that the practitioner is at his wits' end to both medicate and retain his patient. The writer has had a recent and trying experience with a man afflicted with spinal syphilis, who seemed unable to retain the smallest dose of iodin in an excessively irritable stomach. The conventional trial of the bitter tonics was a failure, as was the administration of the salt in a starch solution. The use of "Maltine with Wine of Pepsin" was suggested and tried with the happiest result. In two other cases of non-specific disease where iodin was illy borne, the "Maltine with Wine of Pepsin" was used as a vehicle without gastric disturbance.

Belladonna in Sterility.—Dr. Jones, of Edinburgh (*Columb. Med. Jour.*, Vol. xx., Nov. 7, 1898), states that belladonna is followed by more or less benefit in every disease to which the female sexual organs are liable; and in married women who, though apparently enjoying the best of health and never suffering from any irregularity of the sexual organs, are yet sterile. The exhibition of belladonna internally for some weeks is so frequently followed by pregnancy as to preclude considering the occurrence as a mere coincidence. Though advancing no theory in regard to the matter, the author has noticed that during the exhibition of the drug the external genitals become more relaxed, and the os and the cervix more pliable and softened.

Protonuclein in General Practice.—Dr. G. W. Sherman, of Detroit, Mich., contributes an interesting article on this subject to *The Physician and Surgeon*, for October, 1898, illustrated by a number of clinical cases. He says:

"My first practical experience with protonuclein was on myself. About two and a half years ago I was taken with a severe attack of acute catarrhal inflammation of the nasal mucous membrane, which rapidly extended down the trachea into the bronchi. It began on a Friday morning with an almost incessant sneezing, accompanied by blocking of the nose, fullness in the head and headache, followed later in the day by a thin, copious discharge from the nose, and an irritating cough. By 5 o'clock p. m. the same day my headache was severe and my limbs all ached, and on taking my temperature it registered 101 degrees. I had had similar attacks before, none apparently quite so severe, which always ran a course of from one to three weeks. I had tried quinine and other remedies without any appreciable benefit, and was a willing subject to try something new. I had a few samples of protonuclein and began to take them *ad libitum*, starting about 5 o'clock in the evening. By Saturday morning I felt some better and continued taking the preparation through all that day, still *ad libitum*, and by evening, twenty-four hours after I began its use, felt considerably improved. I continued taking more during Sunday, when my nose cleared up, and the headache, fever, cough, and soreness in my limbs disappeared.

". . . It has a wonderful effect in maintaining the spirits and vitality of a patient during fever, and has no depressing effect; while it reduces the temperature, particularly in typhoid, they do not lapse into that stupid condition which is so characteristic of this disease.

I have given protonuclein in scarlet fever with the effect

of having the temperature decline and the swelling of the glands of the neck disappear, while the rash is coming out. I have given it with great success in puerperal fever, erysipelas, infected wounds, and, in fact, consider it a valuable remedy in all infectious diseases.

"Protonuclein also has quite marked tonic effects, which are particularly noticeable when given in cases of general debility resulting from advanced age. As a tonic it should be given in from six to nine grain doses after meals and at bedtime. In neurasthenic cases it is of benefit, restoring a normal tone to the nervous system. I have given it in a few cases of whooping-cough with benefit. I have given it to a few tubercular cases, but cannot say that it was followed by especial improvement."

The Danger Point in Anæsthesia.—As anæsthesia progresses the corneal reflex is abolished and the pupil contracts to a point. The moment the pupil reaches this point, says the *Journal de Med. et de Chir.*, the anæsthesia is profound and the chloroform should be suspended. If the pupil begins to dilate again slowly and gradually, more chloroform will reduce it again to a point. But if it suddenly dilates rapidly, this is a signal of impending immediate collapse and every effort should be made to facilitate respiration.

Painful Dysphagia Evidence of Syphilis.—J. Garel calls attention to the fact that every person who complains that it has hurt him to swallow for the last few weeks—three, at least—should be considered a syphilitic and treated accordingly. Syphilis can be diagnosed at once from this one symptom of persistent dysphagia *at any stage*. It is frequently the first or only symptom recognized by the patient. The pain vanishes after forty-eight hours' treatment with potassium iodide, unless it is due to that extremely rare cause, incipient cancer or tuberculosis of the throat, which can thus be differentiated.

RETROSPECTIVE DIETETICS.

Cooks on Dyspepsia.—In a recent article upon this subject the head cook at Delmonico's declares (*Me. Jour. of Medicine and Science*) that indigestion has become such a common evil in the United States that he scarcely meets any one who is not suffering more or less from some form of it. He thinks there are various causes for this woeful condition, and first of all, Americans are in too much of a hurry to eat properly, and they err especially in eating too heavy breakfasts. Secondly, American women are not careful enough in selecting the food with which they supply their tables. As a rule they are content to do their marketing by order. On the other hand, the women of France and of Germany, in which countries dyspepsia is uncommon, all do their own marketing, having sufficient knowledge to select good meats and vegetables, and, moreover, in those countries all the women know how to cook. Then in France and Germany little attempt is made to keep food by use of ice, and the meat and vegetables are bought fresh each day. Ice-boxes and refrigerators cut no figure in the households of foreigners. This chef declares this subject to be worthy of very careful consideration.

Another celebrated cook said that if Americans "were more simple in their tastes and did not season their dishes so highly, they would have better health. There are plenty of fresh foods that belong to each particular season, but Americans crave all sorts of unseasonable foods, and these are preserved in cold storage until their nutritive properties are destroyed and they become indigestible."

Another chef, who receives a much larger salary than any college president in America, says that too much candy and ice cream for children lay the foundation of dyspepsia. In Europe children do not get candy, but in America weak stomachs, due to an overindulgence in sweets, are a fruitful cause of stomach, especially among young girls.

The cook who presides over the cuisine of the Waldorf-Astoria says that people in America eat too much meat and that foods are kept too long. Men drink too much liquor instead of pure wines, and, worst of all, they mix their drinks. Americans eat too much at one time; they had better eat less and oftener. American breakfasts are altogether too heavy.

Another celebrated chef declared with considerable emphasis that if he were a doctor he would not allow his patients to eat hot buttered toast, and that as much dyspepsia was caused by toast and tea as by hot griddle cakes.

The Interdependence of Healthy Bodies and Healthy Brains. . . . Of equal importance to proper and sufficient exercise for the body is that of a consistent and adequate supply of suitable food. There is no one matter so directly concerned in self-preservation as that which deals with the problem of alimentation. When, what and how to eat enters into the whole existence from cradle to grave, but notwithstanding the oft-repeated practice of feeding, that knowledge which makes of this necessity both a pleasure and a blessing is yet with certain exceptions to be acquired by laity and profession. In the natural state food might be eaten whenever hunger suggested, and it would be right, but no civilized race of men to-day is living as did its prehistoric ancestors. Hence such a rule would be both incompatible with health conditions of this day as well as highly inconvenient to the habits of society. There are advocates of the pan just suggested, but it strikes me that it is too impracticable to consider seriously. The prevailing plan of three meals per day, as taken in America, is objectionable, since it implies necessarily more food than is needed and more than can be safely introduced into the system habitually, without injurious consequences. My observations have gone sufficiently far to establish satisfactorily that the element of predominance in the causation of disease is closely associated with the excess of food which is consumed daily by nearly all ranks of society. That is, in excess of the bodily need or the strength of the individual to digest and appropriate, judged by the work performed by an average man or woman.

Three light meals a day would suffice in any case, even for those engaged in the heaviest outdoor labor from morning till night. For the sedentary and professional classes, either three light meals, or two meals, noon and evening, with little if any breakfast. Or a moderate breakfast, and dinner in the evening, with a sandwich, a glass of milk, or some fruit, added for a lunch. The point is only to eat according to the actual requirement of the body, and habit has a great deal to do with it, as any one can demonstrate if he would but make the test. Too much eating is a bad habit of nearly world-wide extent.

Clinical and other experience indicates that all classes of food material rightly prepared and taken in moderation are safe and satisfactory, if relished and eaten slowly with thorough mastication. The principal danger, in my estimation, lies in the fact that too large a quantity is ingested, to the detriment of the supposedly well and to the direct injury of the sick.

The mind appears to be independent in many instances of either the health of the body or the brain, but, strictly speaking, this is not true, even through it be intellect of a Milton or a Dante, both of whom enjoyed great capacity for mental action, and each had a large share of bodily ill health But the intellect, since it represents the training of the functions of the brain, may produce mental results immeasurably superior to the standard of general bodily health, although it would be reasonable to expect better things from the development of a functionally healthy brain, however brilliant might be the success of a given one to physically sound. And inasmuch as the processes of physical life are under the control of the instinct, a department of the brain and other nervous centers not necessarily connected or dependent upon intellectuality of mind, it follows that the functions may be kept healthy by instinct and the brain active by reason of a sound body, while the mind be even undeveloped, as in certain acephali and idiots.

That happy co-ordinaton which renders it possible to live intelligently, pleasantly, and usefully in this world, needs a healthy unit, which is, in fact, a healthy body trained and developed to its highest limitations, including the sensibility or intellect, as well as cultivation of a harmonious and sound constitution. This is attainable by hygienic exercise, frugality, temperance, moderation in eating, all depending upon the health of childhood and adolescence for the basis of a perfect manhood. When moderation is exceeded, a forfeit is the law of the universe; each is recorded with such exactitude that none are missed, and the final forfeit is life itself, which is all too frequently a call for some lovable character long before the natural limitation is reached, but nevertheless forced to yield his life to pay the penalty demanded by the vigilance of an eternal law.—An abstract of a paper read before the American Academy of Medicine, Denver, June 6 1898, by Elmer Lee, A.M., M.D., Ph.D., New York.

MISCELLANY.

—A woman with sugar in the urine should never marry.

—An important precursory sign of an eclamptic seizure is violent pain in the epigastrium.

—The *Reforma Medica* says that milk will extinguish burning petroleum by forming an emulsion with the oil.

—University College, Liverpool, England, has opened a school and museum devoted exclusively to the training of sanitary inspectors.

—The treatment of cancer by application of arsenious acid may be rendered painless by adding to the acid an equal amount of orthoform.

—According to *Med. Sum.*, the persistent free application of melted lanolin to an old, wrinkled skin will surely restore a fresh and smooth appearance.

—Japan has made not only primary vaccination, but revaccination every five years, compulsory, and ordains the exclusive use of aseptically prepared calf lymph.

—Ginger drunkenness means getting drunk on essence of ginger, and it has one peculiar effect discovered by Dr. A. G. Thompson, viz.: it causes optic atrophy or blindness.

—That Prince Bismarck was a doctor of medicine may not be generally known. The degree was bestowed on him—*honoris causa*—by the Jena University late in the seventies.

—The death-rate in Stettin is reported to be greater than in any German city of over 40,000 inhabitants. It is 40.1 per 1,000 for one year; the smallest is at Schoeneberg, with 7.8 per 1,000.

—Chloroform is now very seldom used in the Dublin hospitals. The patient is first put under the influence of nitrous oxide, and when anaesthesia is secured it is prolonged by means of ether.

—The Cincinnati *Lancet-Clinic* relates the story of an autopsy where a bullet was found in the wall of the heart, received in 1861, thirty-seven years ago. The death was occasioned by cancer of the arm.

—MIDWIVES.—The one hundredth report of the Society of the Lying-in Hospital shows that of the 51,117 births reported to the board of health in this city last year, 23,892 were under the care of midwives.

—Hegar regards the inability of mothers to nurse their children as a sign of degeneracy, and he counsels young men on behalf of posterity to select for wives women whose breasts are well developed.

—Dr. Munde recommends vaginal injections of bromide of potash, one dram to a pint of water, in cases of so-called irritable uterus, diffuse pelvic pains and hysterical neurosis in various parts of the body.

—According to the *Cronica de Ciencias Medicas de Filipinas* the insurgents dress wounds with dry salt or strong brine, for lack of the usual antiseptics, and wounds from firearms heal under it in four or five days.

—Henry and Richard Clark, brothers, and both blind, who live at Asheville, N. C., are employed by the Government as mail carriers. They travel to the little mountain towns over rough roads, without guides, trusting entirely to the intelligence of their horses.

—Dr. A. H. Cordier, in the February *St. Louis Medical Era*, remarks that transient physiological enlargement of an ectopic organ is noticed only in the spleen and the kidney—the former soon after a meal or during physical exertion, the latter during the menstrual period.

—Guy's Hospital has received an anonymous gift of $6,000 for the endowment of medical research, as the result of an address by Mr. Balfour, leader of the House of Commons, on the subject of research on the occasion of the distribution of prizes at the medical school of Guy's Hospital.

—Peanuts have a faculty for absorbing aclohol and preventing it from demoralizing the nerves and upsetting the thinking machine, without entirely curtailing its exhilarating effects. The large proportion of oil in the peanuts accounts for this result. A good wine-glass of olive oil has the same effect.

—A Pennsylvania doctor has been found guilty of passing Confederate money on the unsuspecting natives of Porto Rico as genuine United States paper money. His plea when courtmartialed was that he was in an enemy's country, and thought he had a right to despoil that enemy. He was sentenced to five years in the penetentiary.

—Hendricksen, in the *Wratch*, says a surgeon was called in by a Russian husband, who cut an incision through the two larger labia, and when the wounds were healed, like a pair of pierced ears, the husband closed them with a handsome gold locket, having a key that opened a secret spring—a locket that only the Russian brute can open.

—Dr. Stanley M. Ward (*Med. Jour. of Med. and Science*) says that, having had many cases of biliary lithiasis, he finds that if the patient will eschew fats and take a dram of phosphate of soda in hot water three times daily for six months, then twice for three months, and continue the dose before breakfast for the balance of the year, recurrence is very rare.

—The last survivors of the war for Grecian independence among doctors, Dr. Mavrogenis, has just celebrated his one-hundredth birthday. Born at Pasos in 1798, he left his medical studies at an Italian university in 1821 and returned to Greece, where he distinguished himself in many battles, receiving numerous wounds. The doctor is in good health and lives with an elder sister, aged 110 years.

—No profession is so exposed as our own (*Medical Times and Hospital Gazette*) to the encroachments of not only petty meanness, but also of deliberate fraud. In none are valuable services so miserably recompensed. Unable to gauge our work by the skill required for its execution, the public adopts the readiest rough test to hand, usually the time occupied, or the amount of medicine administered.

—P. C. Layne (*Cincinnati Lanet-Clinic* July 9, 1898) reports the delivery of a morphine habitue, who had been taking daily 5 grains of morphin hypodermically, of a well-developed child, which gradually became irritable and fretful, and finally refused food. One-twentieth of a grain or morphin was administered hypodermically with no other than a soothing effect, and under small doses the child has continued to grow rapidly.

—In the manufacture of air-cushions and the like for the sick, very tough paper heavily shellacked and varnished in the Japanese fashion is becoming very popular among German physicians. Such articles resist moisture and the deteriorating action of body secretions much better than does rubber; they stand quite as rough usage, are generally as durable, do not become so hot and uncomfortable and are less than half as costly.

—Perlis has made the interesting observation that in a considerable number of great men (as, for instance, Cuvier and Rubenstein) a hydrocephalus would appear to have existed from infancy, and to have disappeared later in life. He concluded from this that in a skull which had become dilated, the eventual growth of the brain would meet with less resistance than in an ordinary healthy skull. A moderate degree of hydrocephalus in infancy would therefore appear to be a rather desirable possession.

—The *Medical Press and Circular* observes, with regard to the penal cases brought on a recent occasion before the General Medical Council of Great Britain, that they "were few in number and, with one exception, uninteresting in character. The exception was the erasure of the name of Mr. Joshua Hamilton Hart, of Morley, near Leeds, for aiding and abetting one Munyon in the sale of certain quack remedies, in connection with which his name and qualifications were advertised as consulting physician."

—The Russian Government has just forbidden the further sale of a supposed herbal remedy that, owing to extensive advertising, was in wide use among the people. Under the name of Ephedra Vulgaris the remedy had hitherto escaped the rigid law against secret remedies in Russia, its title being its true botanical name. A large amount of the stuff ready for shipment was confiscated and proved to be ordinary hay. Pound packages were being sold in large numbers at from 3 to 5 rubles ($1.50 to $2.50) a pound.

ORIGINAL ARTICLES.

REPORT ON THE RECENT APPEARANCE OF CEREBRO-SPINAL FEVER (EPIDEMIC CEREBRO-SPINAL MENINGITIS OF STILLE) IN CHICAGO, 1898.

By William J. Class, M.D.,

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THE cases here cited occurred under the observation of a number of skilled diagnosticians. All uncertain and doubtful cases were eliminated, thus curtailing the number, but we hope its value is thereby increased. One regrettable feature is that a large number of post-mortem records were not available. The records are as exhaustive as was considered necessary, although varying somewhat in detail by being collected from a number of hospitals.

[Then follows the clinical report in detail of 38 cases, for which publication we regret to say that space will not permit. The analysis which follows gives a good idea of the symptomatology of the epidemic.]

Symptomatology of the Foregoing Cases.

Although the symptomatology of cerebro-spinal fever has been exhaustively treated in descriptions of epidemics occurring elsewhere, yet as almost every epidemic offers some distinctive features, a closer consideration of the symptoms met with in these cases may be useful.

Pain.—Headache was found present in all of the cases where a complete history could be obtained. As a rule, it affected the entire head, being most severe in the occipital region. In these cases patient at the onset of the disease complained chiefly of severe pain in the limbs, while the head was not much affected. In four cases severe backache was the symptom causing the greatest distress to the patient. In three instances abdominal pain was noted. In two cases there was hyperaesthesia of the greater part of the body, so intense in one of the cases that the slightest touch would throw the patient into convulsions. In one case the pain was chiefly referred to the chest, without there being any objective signs of any diseased condition in the thoracic viscera; another patient complained of boring pain in the bones, resembling that of osteomyelitis. Tenderness in iliac and splenic areas was noticed in one case. The spine was generally sensitive, although in a varying degree; in some cases the slightest touch would elicit pain, while in others deep pressure was necessary. Attempted flexion of the head usually caused pain, which in some cases was of an excruciating nature, causing the patient to cry out aloud. In some of the cases the headache and tenderness of the spine persisted after the patient had made an apparent recovery.

Chills as an initial symptom occurred in 7 out of the 38 cases in the series. In two cases the patients had complained of a chilly sensation several days before the onset of the acute symptoms. In one case a chill lasting 30 minutes occurred on the third day of the disease. The majority of the cases beginning with a chill ended fatally.

Gastro-Intestinal.—Vomiting is one of the most constant initial symptoms of cerebro-spinal meningitis, having occurred in 26 cases at the onset, while in four cases it occurred during the first days of the disease. In the cases in adults true projectile vomiting was seldom met with at the onset, although it was noticed in several cases later on. In some cases vomiting was almost continuous and proved to be a very annoying symptom, medication being of little avail. As a rule it was independent of the taking of food. The tongue was coated in the majority of cases. Of greater diagnostic value was the trembling of the tongue, often noted on its being protruded. The condition of the bowels also varied greatly; in six cases diarrhea occurred; constipation was more frequent, occurring in nine.

There is one symptom to which the writer wishes to call especial attention, as it has not been to his knowledge dwelt upon to any extent in previous reports, this is, difficulty in swallowing. It was noticed in six cases, each of which ended fatally. It must therefore be considered as a grave omen in the prognosis. As a rule it was found late in the disease, when the patient had become semi-comatose, but in one instance it occurred several weeks before death, while the patient was still perfectly conscious. Its causation is not clear, but it seems plausible that it is due to an accumulation of fluid in the fourth ventricle exerting pressure on the nerve centers which control deglutition in its immediate vicinity. As lumbar puncture was not made in any of the cases where this symptom was present, the effect of the withdrawing of the fluid could not be ascertained.

Cutaneous.—Herpes labialis was the most prominent skin lesion, and was present in 12 cases, which is about the same percentage as was found in the Boston cases. One case showed a papular eruption, another reddish brown macular eruption. Petechial patches were noted once. Tache cerebrale was found in a number of the cases.

Retraction of the Head.—In 30 cases there was retraction, varying in degree; in some being so slight as only to be noticeable on close examination or on attempting flexion, while in others marked opisthotonos was present. In one case the rigidity was so great that the child could be lifted by the head and heels.

The Eyes.—These were more or less affected in a large proportion of cases and are of interest in connection with diagnosis. The ocular manifestations varied from a simple congestion of the conjunctiva, which occurred in six cases, to tropho-neurotic ulceration of the cornea and destruction of the eye in one. In two there was purulent conjunctivitis. One showed on ophthalmoscopic examination a cupped disk. The pupillary symptoms were not constant; in five cases the pupils were dilated, in two of these the dilatation was more marked in one eye than in the

other; they were contracted in four. Dilated in one eye and contracted in the other in one case. In one they were seen to dilate and contract from time to time without apparent cause. Nystagmus was observed five times; paralysis of the muscles of the eyeball once, the eye remaining fixed. Strabismus occurred in four cases, in one instance being transitory. Paresis of the right external rectus was noted once. In one case there was absolute blindness extending over a considerable period of time without any apparent lesion to account for it. Puffiness of the eyelids occurred in two of the cases, and diplopia once. Photophobia, which is generally described as one of the symptoms, was observed in a comparatively small number. Lesions of the fundus also did not form a prominent feature, although this may be partly due to the fact that an ophthalmoscopic examination was frequently omitted.

The Sensorium.—In 20 cases the patients became delirious, and in some cases, especially in robust young men, violently so. In some instances hallucinations were present, resembling those of delirium tremens. The delirium in some of the cases appeared early, the patient being markedly delirious on the second or third day of the disease; in others it did not appear until the second or third week. The delirium in these cases did not seem to have any connection with the height of the temperature. In five of the cases the patients, though conscious, seemed to be perfectly apathetic in regard to their surroundings and conditions, while in others again there was noted great irritability of temper, the slightest cause producing anger. Coma was observed five times and was as a rule absolute, it being impossible to arouse the patients, although in one or two of the cases the patient suddenly regained consciousness, but relapsed into his former state after a brief interval. In two of the cases the mental faculties were seriously impaired after recovery from the acute symptoms had taken place.

Motor Disturbances, Reflexes, Etc.—Paralysis of all of the voluntary muscles of the body was observed in two cases shortly before death. Paralysis of the facial muscles on the left side was also noted in two instances and paralysis of the right hand once. In two cases contractions of the muscles occurred. In three there was muscular twitching, chiefly in the extremities. Tremor of the hands was observed in two instances. Involuntary evacuations of urine and faeces during the course of the disease was noted in six of the cases; it is not necessarily a fatal omen, as several of these cases recovered. Subsultus tendinum was found twice and, as in typhoid, is a grave sign. Convulsions were rare in adults, but frequent at the onset in children. In several children convulsions occurred from time to time during the course of the disease; in one the slightest touch would bring on an attack. The state of the reflexes was not constant; as a rule they were not perceptibly altered. In five cases the knee jerk was exaggerated and in three it was diminished.

In one it was entirely absent, while in another it was absent on one side and increased on the other. The cremasteric reflex was absent in one case; increased tricipital reflex was noted in one instance. The causation of this variation in the reflex action has never been satisfactorily explained.

Abdomen.—In 12 cases there was retraction of the abdominal walls, producing the condition described as "boat-shaped." Tympanites was present in three cases, and in one of these the abdomen was markedly tender. Splenic enlargement was observed in four cases, but in none was the enlargement as great as it usually is in typhoid fever. The liver was found enlarged in two instances. Gurgling in the iliac fossae was elicited in two cases examined for this rather unreliable symptom.

Joint Affections were encountered in five cases, varying in severity from simple tenderness, and pain on motion to a condition closely resembling acute articular rheumatism; in no instance, however, were these symptoms of long duration, and suppuration was not noticed. The joints chiefly affected were the wrists and next the ankle joints.

Blood and Urine.—A careful blood analysis was made only in a limited number of cases; in all instances leucocytosis was found to exist. In one case pigmented leucocytes were found together with a few extra-corpuscular bodies containing pigment. Widal's test was generally negative, although in one or two instances a partial reaction was noted. In seven of the cases the urine was albuminous; in one sugar as well was present. An excess of earthy phosphates was noted once. In none of the cases where albumen was discovered were casts found. Cylindroids were found in one case, the urine being otherwise normal.

Chest.—True lobar pneumonia as a coincident lesion was noted in two instances, in both, however, the symptoms of meningitis predominated. Other symptoms were found in five cases, chiefly diminished resonance, which could not be properly explained; this condition was encountered in three cases. A blowing systolic murmur at the apex beat occurred in two cases. Cheyne-Stokes respiration was noticed in one case during the course of the disease, and in several instances shortly before dissolution took place.

Pulse and Temperature.—The pulse and temperature curves present the same variations as those described by Wunderlich. As a rule the initial symptoms were accompanied by a rise in temperature; this rarely exceeded 102 degrees F. during the first 48 hours. In some cases this initial rise was followed by a period of three or four days, during which the temperature would remain normal, after which there would be another rise. The height of the initial fever afforded no criterion whatever as to the severity of the disease, as in a number of the cases which began with violent symptoms and a considerable increase in temperature the patient made a rapid recovery, while in others which began insidiously and in which the rise was very slight at the outset, the symptoms gradually increased in severity, the disease ending fatally. Often after a continued rise extending over two or three weeks there would be a sudden drop to normal, the tempera-

ture remaining low from three days to a week, followed by another rise which in some instances exceeded the primary one. One curious feature was that as a rule the drop was not attended by a corresponding amelioration of the other symptoms; in other cases again there would be considerable improvement for a certain period, notwithstanding the temperature remained high. The time of day seemed to exert little influence in the temperature. Some cases showed a distinct morning remission, but this was not constant, as it frequently followed that on the day following the morning temperature would exceed that of the previous evening; the next day would perhaps again reverse the order. In some cases the disease ran almost an afebrile course; in fact, it may almost be said of this disease that the only regular feature of its temperature curve is its irregularity. An ante-mortem rise in temperature was noted in three cases. In one of these the axillary temperature was 109 degrees F. There was no relation between the temperature and the pulse. It may be set down as a rule that the characteristic feature of the pulse in epidemic meningitis is its slowness, although this rule is not constant. In one instance in our series where the patient had a temperature of 105 degrees F. the pulse at the same time was only 80. Within a few hours previous to death there was as a rule a great increase in the frequency of the pulse, even in those cases where it has been slow during the course of the disease. In volume the pulse is usually full; a dicrotic pulse was seldom met with.

Special Symptoms.—Ear troubles, on which special stress has been laid by previous observers, were only noticed in a small number of cases. Some deafness was encountered comparatively often, and in one or two instances suppurative middle ear disease; but aside from these there was an almost complete absence of aural complications. Lesions of the nasal and pharyngeal mucous membranes were also infrequent in their severe forms, although redness or a slight catarrhal condition occurred in a number of the cases. Epistaxis was found in one instance.

Bulging of the fontanelles occurred as a rule in younger children, in one case the intra-cerebral accumulation of fluid causing a considerable increase in the circumference of the skull. In protracted cases convalescence usually found the patients greatly emaciated and exhausted, from which they recovered very slowly, some of the young children, in fact, succumbing from inanition after the acute symptoms had subsided.

General Course of the Disease.—The average duration of the Chicago cases with recovery was four weeks. Some ran a much shorter course, recovery taking place within two weeks, while in others it was delayed from six to eight weeks. Relapses were noted in several instances: it cannot be said, however, that this is a disease prone to relapses. In the fatal cases death usually took place within two weeks. Cases of "meningitis cerebro-spinal siderans," in which death takes place within a few hours or days, were very rare during the epidemic. Of the 38 cases described 25 ended fatally, a mortality of 65 per cent. This figure is far from correct when applied to the entire number of cases in the city, as meningitis is not properly a "hospital disease," comparatively few cases being sent to the hospitals, and these only where the disease was severe. This explains the apparently excessive mortality, as our cases were almost exclusively taken from hospital records. The writer has the testimony of a number of physicians to the effect that mild cases not requiring hospital care were very frequent, and that if these were averaged up with the more severe cases, the total mortality would probably not exceed 20 per cent.

Sanitary Aspect of Epidemic Cerebro-Spinal Meningitis.

There are few diseases excepting leprosy about which so many different opinions have been expressed as to the mode of propagation as epidemic cerebro-spinal meningitis. As it is a disease which is rather on the increase and a constant menace to an unprotected populace, the study of the factors which enable it to spread and the means by which it can be prevented becomes one of considerable interest to the sanitarian. The question of propagation by contagion can only be decided by a careful weighing of the testimony. Those factors which speak against the disease being spread by direct contact are: *a.* Scarcely any of the epidemics have shown continuous extension, the disease often appearing simultaneously in widely separated communities, while the intervening country remained immune. It thus differs from most contagious diseases, such as small-pox or yellow fever. *b.* The source of infection as a rule cannot be discovered, in this respect also differing from the diseases mentioned. *c.* During a number of epidemics it has almost been the rule that inmates of the same house where the disease occurred escape contagion; only isolated cases occurring. *d.* In a large number of instances isolated cases occurred in various sections of a city, the disease not being confined to any particular locality. *e.* Persons in no way coming in contact with those having the disease are afflicted. The nurses and physicians in attendance on cases of epidemic cerebro-spinal meningitis rarely take the disease.

In favor of its contagious nature the following facts are quoted: *a.* That the disease quite frequently attacks members of the same family, as is shown by Brooks, '78; Kohlman, '89; Trevelyan, '82, and others. *b.* That persons nursing cases of meningitis have taken the disease, as is stated by Erdman, '81, and others. *c.* Epidemics in hospitals and jails, nearly every inmate taking the disease; the disease sometimes being confined to one ward. Instances of this kind were reported by Lancereaux and Besancon, '83. *d.* Cases occurring grouped in little foci, as in the epidemic at Lanaconing. *e.* Evidence that in some instances the disease is carried from one person to another by a carrier, who remains immune, as was shown by Peterson, '84, in a child, five years of age; the brother-in-law living in the same rooms had to enter a house where the disease was prevailing, the child taking the disease after a few days, while the brother-in-law es-

caped. In this same epidemic described by Peterson the contagion could be traced in many instances. *f.* In the French epidemics during the early forties the disease extended with the movements of the troops. In the Chicago epidemic there were a number of instances recorded which spoke in favor of the disease being contagious. In one instance there were three cases in one house, two in the same family; these cases developed within about a week of each other. In four other instances which came to the writer's notice two cases occurred in the same family. About one half of the cases mentioned in this report occurred within a territory about a square mile in extent, while the balance were scattered over almost the entire city, the extreme south and west sides remaining immune. It will be seen by studying the *pros* and *cons* mentioned above that they are almost exactly contradictory and therefore would have a tendency to neutralize each other, making the testimony worthless either way. This, however, is not the case when the disease is considered in the light of recent research. The writer firmly believes that epidemic cerebro-spinal meninigtis *is* contagious—not like measles and scarlatina, but resembling phthisis pulmonalis very closely. Kiefer, '74, Ghon and others have proven almost conclusively that the specific germ exists in the buccal and nasal secretions, hence it stands to reason that where through uncleanliness or neglect these secretions are scattered broadcast it is quite easy for the organisms to enter the nasal and buccal cavities of persons exposed and for the disease to develop. The nature of the bacterium explains why the disease is apparently in some instances contagious while it is not so in others. For instance, the germ will only grow for a limited length of time. This explains why persons moving into rooms previously occupied by a person having the disease do not contract meningitis The reason why the disease does not spread in the wards of hospitals is because the infective material is not scattered around. The disease is more prevalent during or following wet weather, because the germ retains its life longer in a moist medium. In short, by a careful consideration of the mode of growth of this germ a majority of the apparent inconsistencies in the history of the spread of this disease will become clear.

The question whether cases should be isolated is of interest both to the sanitarian and to the practitioner. By the medical officers of the great military establishments of Germany, Great Britain and France, cases of this disease are strictly isolated as a precautionary measure, for epidemics of the disease in barracks have been by no means rare. During the recent limited outbreak among the troops at Chickamauga Park the cases were also isolated. with the apparent result of a stoppage of the spread of the disease. As a rule in large city hospitals the cases were admitted into the general wards without any other inmates taking the disease. Epidemic cerebro-spinal meningitis at the present time is not considered as a contagious disease by the health boards of our great cities, and physicians are not required to report the cases occurring in their practice. Although epidemic meningitis does not as a rule spread by direct contact, still it has been proven to do so in exceptional cases, when the conditions for its propagation are favorable. These conditions are uncleanliness and a general unsanitary condition of the environment of the patient. It seems probable, if a certain control could be exerted by the public health authorities, the spread of the disease could be limited to some extent. Isolation should be insisted upon whenever practicable, and sanitary defects remedied. During an epidemic it might be advisable to caution those who are exposed to use a mild antiseptic nose and throat spray or wash.

Influence of Sanitary Defects.

This disease is no exception to the rule that the spread of epidemic diseases is increased by unsanitary conditions. Of course, it has been stated that the disease occurred among all classes and conditions of people, but many instances which prove the relation between epidemic cerebro-spinal meningitis and unsanitary conditions could be cited. During the Chicago epidemic 51 houses where cases of meningitis had occurred were inspected by the writer. In 21 of the houses or their surroundings unsanitary conditions were found—in some instances very bad. In one house where a fatal case occurred, nine families were living in a ten room house, which was littered with filth of every description. Defective plumbing was discovered in a number of instances, and remedied through the Health Department. In 18 of the houses the sanitary condition was fair, while 12 were in a good condition. The majority of the cases occurred in the poorer quarters, inhabited chiefly by foreigners.

From a consideration of our present knowledge of epidemic meningitis the writer arrives at the following conclusions:

1. That epidemic cerebro-spinal meningitis is to be classed among the contagious diseases, belonging to the same category as phthisis pulmonalis.

2. That unsanitary conditions exert great influence in affording a proper nidus for the growth of the germs of this disease.

3. That health authorities should receive notice of the occurrence of a case of this disease, in order that sanitary defects may be remedied.

4. Persons afflicted with this disease should, whenever possible, be isolated, and all evacuations should be rendered sterile by the use of antiseptics.

OCCLUSION OF POSTERIOR NARES, WITH REPORT OF TWO CASES.*

By J. Rule Fritts, A.M., M.D., Mexico, Mo.

ON Nov. 3, 1894, Mr. S. came to my office with his daughter, Alice, aged 10, to see me with reference to some trouble in the nares, stating it was impossible for her to breathe except through the mouth. Upon examination I found

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a large gelatinous polypus in each nare, completely blocking same anteriorly, being almost impossible to pass a small probe up the side.

Supposing, without any further examination (which, in fact, was impossible), that this was the only and sole cause of the trouble, I proceeded to remove them, which was done completely, and the child returned home, with instructions to report in a week or ten days, which she did, but still reporting impossible to breathe with mouth closed.

I then, on a thorough examination, discovered the cause of the trouble, viz.: The posterior nares being completely closed by palate bone passing upwards and backwards and attaching to the sphenoid and forming a union between the center and the vomer, causing a large ridge or thickened center of the abnormal bony part, completely closing the posterior nares.

This trouble had never been discovered by the family. She was robust, and one of a family of ten, none of them deformed in any particular.

She had no idea of the sense of smell from the personal enjoyment; sense of taste good, hearing excellent, but always kept the mouth a little open; complained a great deal of thirst and dryness of the mouth and throat.

To test the sense of smell I placed a good, strong, healthy onion to her nose; she, closing her eyes, stated that she could detect nothing by which she could tell what it was.

The only time her parents noticed any trouble with her was when as infant. In nursing she was fretful, and would cease often, making a few swallows, and rest, as they thought. As she grew older they noticed that she always slept with mouth open; in fact it was open all the time.

An operation was decided upon to open up the passage. The first attempt was made with a large steel probe, to come in behind over the soft palate, but the growth was found entirely too solid for this procedure.

I then concluded to use the dental engine, and still come from the rear or over the soft palate; but this was a failure.

I then had a burr made, conical or acorn-shaped, with shank two and one-half inches long, burr as large as could be passed through anterior nares (nearly one-half inch). Drill was so made as to fit in straight end of hand hold of dental engine. After the patient being well anesthetized, introduced the burr into the anterior nares until the bone was struck. Passing the forefinger of the left hand into the mouth behind the soft palate, and bringing it in contact with the bony part, the engine was started slowly, and I could distinctly hear and feel in the hand the cutting of the burr on the bone, the engine being run quite slow; in a few moments the drill passed through the bone, striking the finger in the mouth. In withdrawing the drill the orifice made in bone was enlarged as much as was thought safe by cutting on either side with drill. The right side was operated upon in the same manner. After recovery from the anesthetic she was removed to boarding house.

Considerable nausea and vomiting followed from the effects of anaesthetic and blood swallowed during the operation. There was but little hemorrhage, and almost all of that was swallowed.

Directed a carbolized wash to be used every two or three hours. Saw patient next morning, and found her resting nicely, having slept well. Syringed out the parts with carbolic solution, causing a few clots of blood to pass away. This was done thrice, daily, and patient on third day went to her home in an adjoining county. Reported again in 12 days; some little difficulty in breathing through left nares, but caused by a severe cold of that side. Nares washed well, which discharged considerable quantity of mucus, and breathing then was quite easy. There were no tubes or appliances placed in nose. But April, 1894, she returned with some difficulty in breathing through left nostril. Upon examination I found that the mucous membrane had completely covered the aperture of that nare; this I punctured and inserted a hard rubber catheter point to prevent its reuniting; this remained for about four weeks

Now (four years after the operation) patient is breathing entirely through the nostrils, sleeping with mouth closed, and that peculiar expression of the facial muscles caused by the open mouth has disappeared, and the face has become natural, the articulation has improved constantly, and is now almost perfect.

The sense of smell has greatly improved; in fact is now quite good, as proved by test of onion. She stated, when tried about two months after operation, in holding it to nose, that it tasted like an onion, while before the operation this was dormant. In fact, she says there is now a comfort and satisfaction to her that she could never feel and appreciate before in life.

The second case is that of John G., an Irishman of 24 years of age, who came to my office in March, 1897. The occlusion in his case was very similar to that of first case, except the bony parts were much harder and the mucous membrane much more dense, and seemed to have less sensation or feeling. The operation was the same as in first case, but harder to drill, being thicker. He did not know of the occlusion when calling for treatment, but came on account of tumors, which were first removed; then the diagnosis of occlusion was made.

From the trouble arising from first case by mucous membrane uniting over the opening made by drill, I with this case attempted to prevent this trouble from the start. This I did by taking two silver female catheters, using about (3½) three and one half inches of the crooked or fenestrated end and drilling holes through the opposite end, then dropping the crooked end through nares into the throat, passing a shield pin through the holes drilled in opposite end and letting this rest upon the nose externally, thus holding the two tubes in position. These were removed every 12 hours for first three days, and afterwards as was deemed best, and cleared of all mucous and reinserted, and continuously used for four weeks to prevent the reuniting of mucous membrane or the re-attachment of the bone. With this case there has been no trouble what-

ever after the treatment was concluded, in about four weeks; and to-day, about 13 months, the apertures are as large and open as freely as when treatment was discontinued; breathing nasal, but sense of smell has not returned or even improved. The sense of taste in both cases in their primary condition is more acute than in any persons I have ever seen; after the operation is neither destroyed nor increased.

In looking up the literature upon the subject I find it very meager.

Druitt makes this statement: "The nostrils are sometimes imperforate owing to congenital malformation. The passage may (if parents wish it) be restored by a cautious incision, and must be kept open with bougies. If, however, the obstruction be seated far back it ought not to be interfered with."

We are greatly indebted to Dr. Alvin A. Hubble, of Buffalo, N. Y., for an excellent article written in 1886, reporting a case of this nature. He gives a tabulated list of 17 cases, besides the one treated by himself; it gives a condensed statement of the case as reported by him, in this article getting my data exclusively from his paper.

The first reference made to this condition was by Adolph Wilhelm Otto, M.D., of Breslaw, in 1831, who implies by his statement that cases have been seen, but gives none.

Karl Emmert records the first which came under his control, in 1851, that of boy, seven years of age, who had been from birth unable to breathe through nose; both nostrils entirely closed. Sense of smell entirely wanting; the occlusion was bony, but was unable to say from what bone the closure came.

The next recorded case is that of Luschka, in 1859, who describes an infant who died shortly after birth, in which both nares were occluded; a post mortem showed the occlusion to be caused by a plate of bone extending from palate bone up and backwards to the sphenoid.

R. Voltolini, in 1871, reports a medical student with closure of right nares, being membranous and congenital.

Fraenkel mentions case sent him by Dr. Wolff, in which there was bony closure of right side. Fraenkel satisfied himself that the obstruction was smooth, solid, bony wall, covered on both sides with mucous membrane.

Bitot reports a case of atresia, or obstruction of posterior nasal orifice.

E. Zamful, of Prague, in 1876, reports case of girl, 15 years of age, with congenital stenosis of right nares, obstruction bony, on left side; nasal cavities were normal.

Dr. J. Solis Cohn, of Philadelphia, gives next case, in 1879, that of an infant who had great difficulty in sucking or breathing; child relieved by boring through the structure with steel probe.

Dr. T. G. Morton, of Philadelphia, reports case of boy, eight years old, in Pennsylvania Hospital, of left side of nostril.

Dr. T. R. Ronaldson, of Edinburgh, in 1881, of female child, delivered after short labor; the difficulty in breathing noticed. Child died in short time after birth. Post mortem revealed the occlusion of posterior nares by a firm membrane.

Dr. Oren D. Pomeroy, of New York, reported case in 1881, in which there was bony occlusion of right nostril in man 44 years of age, which had existed longer than he could remember.

Dr. Richard C. Brandiers, of New York, showed a young girl to a society of German physicians, who had come to him with a nasal obstruction of the left side. After removing several polypi he found a complete bony occlusion.

Dr. T. B. Wilkerson, of Young's Cross Roads, N.C., reported a case of 1882, in which both cavities were closed at their posterior outlets.

Dr. Sommers, of Prague, took before the medical society of that city, in 1883, a boy, 19 years of age, in which there was bony occlusion of the left side.

Prof. L. V. Schrotter, of Vienna, reports a case, in 1874, with occlusion of both nares.

Dr. W. E. Casselbury, of Chicago, reports, in 1885, the case of a Polander, about 40 years old, who had suffered for 13 years with an obstruction of the nasal cavities. Examination revealed a heavy membrane covering the left side.

From the cases reported above, 17, and including my own, 19 cases are upon record. Among the number 14 cases are bony and 5 of them membranous. Two of those were incomplete in occlusion and were membranous.

There are certain symptoms which are common to all: the peculiar facial expressions, poor articulation, nasal voice, dry throat and mouth, difficult nursing, loss of or inability to smell, with a mucous discharge, as of cold. As to modes of treatment used: galvano cautery, drills, dental engine, trocars, chisels, knife, tents, tubes have all been used successfully.

The prognosis is generally admitted to be bad in infants in all forms of occlusion of both nasal passages of whatever form. Some cases of double congenital occlusion have died soon after birth from asphyxia, and all have been raised with difficulty. This would suggest an early operation for relief, and the keeping of mouth open continually and the protruding of the tongue until nasal breathing can be established.

THE NECESSITY OF MAKING AN EARLY DIAGNOSIS OF APPENDICITIS.*

By Homer I. Ostrom, M.D., New York.

THE following cases illustrate the necessity of making an early diagnosis of appendicitis, and the equal necessity of prompt action when the diagnosis is reached.

I will preface my report of these cases by again expressing my opinion that a diseased appendix can never be restored to health; that an appendix that has once become sufficiently irritated to be recognized as the seat of disease is a damaged organ, and from its physiological position in man, and its frequently anomalous anatomical position in the abdominal cavity—it being a rudimentary and apparently useless organ—is ever thereafter a damaged organ, not likely to resume its normal state of quiescent innocence. The best

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thing an appendix can do is to remain quiet; if it begins to act it at once makes trouble: if it takes upon itself a function, trying to do the work of the caecum, secreting mucous from its mucosa, and assuming the general activity of the large intestine, *faulty drainage* results, and as a consequence we have the initial stages of inflammation, suppuration, and rupture of the organ.

My belief in the value of making a diagnosis, and the necessity of an early operation, is further strengthened by the fact that we cannot always tell, even after the most careful examination, just how far the process has gone, or whether the patient is for the time being safe from the septic infection that must follow rupture of the abscess, the inevitable consequence of the imperfect drainage of the appendix that results when that organ has assumed a function for which it is not fitted.

My creed in relation to the vermiform appendix is therefore, "The diagnosis of appendicitis necessitates an operation for the removal of the appendix." Nor am I inclined to wait for what is called the "favorable" time to operate. *The favorable time is the first opportunity we have to operate*, and the conservatism that will wait until pus is shut off from the general cavity by the peritonitis which the pus develops is, to me, a mistake, and should have no place in modern aseptic or antiseptic surgery.

Why, we may with reason ask, should we not open the abdomen and drain a recent appendicial abscess? Why should we wait until pus has diffused itself, and set up sufficient inflammation to stop its further progress? Why should we not treat pus in this region upon the same lines that we treat it elsewhere? Why should we withhold our hand, with the prospect of general peritonitis before our patient,—for who can tell where the wall will form, or how much of a protection it will afford when it has formed—and not give our patients the benefits of modern surgery? If the surgery of to-day means anything, if the discoveries in bacteriology are of any practical use, they are in the line of pus cases, and in just the class of cases of which we are speaking. If modern surgery possesses any claim for our consideration, it is by virtue of our ability to save these lethal pus cases that our predecessors were powerless to save. In skill of operating we cannot exceed the past masters in our art; in boldness, in courage, we may well look upon them with admiration; for their courage, though they did not perform the marvels of abdominal surgery that are now of every-day occurrence, was fully equal to our own, seeing that they did not have the benefits of aseptic surgery. The surgery of to-day is great, by virtue of its ability to control suppuration, and the effects of the development of poisons within the system. Aseptic surgery in its broadest sense should be our guide in all our work. We should not wait until the system is septic before we act, and thus be obliged to use antiseptic treatment, but should give our patients the benefits of modern scientific discoveries, and anticipate, while it is in our power to do so, the condition that is certain to obtain at some time, when the question is one of pus formation.

Case I.—A boy, 15 years old, had been perfectly well until a few days before I was called to see him by his family physician. He was in the country at the time of the beginning of the attack. This attack began after rather violent play, and was ushered in with pain in the abdomen, not well defined, some nausea and vomiting, and constipation. The condition was diagnosed by the local physician as gastritis, due to rather indiscreet eating. As the boy did not improve he was brought to New York, and seen by his family physician, who at once called me in consultation. When I saw him the disease had existed about four days. We found the temperature ranging from 100 degrees to 103 degrees, and the pulse from 120 to 130, rather strong, but—and this is a condition of the pulse that I always find in these cases—uneven in quality. It may be regular, but the filling of the canal is not uniform. Little pain was present, and there was only slight tenderness over the abdomen. In the region of the appendix there was a decided tumefaction, and tension of the rectus muscle. This tension I have never failed to find when the appendix is involved. The oblique muscle may or may not be involved, but the band of the right rectus is always so. The reason for this I do not understand, for the appendix is not directly under the muscle, but that it is for the protection of the sensitive organ we must conclude. Nothing in the history of this case indicated that rupture had taken place; there had never been severe pain, and there were no symptoms of collapse. I advised immediate operation. I have never found a worse condition of the abdomen from appendicitis than existed in this case. The appendix had ruptured near its attachment to the cæcum, and was gangrenous; the abdomen was full of pus and faeces, the cæcum had also ruptured, and was gangrenous, and certainly one-half of the omentum was gangrenous, necessitating its removal. The condition I found showed clearly that the disease had existed longer than the symptoms indicated, and the decomposition of the pus, which was extremely offensive, gave indubitable proof that rupture had taken place almost before the boy returned to New York and was seen by his family physician, and still at that time he was thought to be suffering with nothing more than a severe attack of indigestion. A peculiar feature of this case was that, though the pus had been present in the abdominal cavity for several days, there had been no attempt on the part of nature to shut it off; general peritonitis was present, and the pus was free in the abdominal cavity.

I repaired the intestine, ligated off the gangrenous omentum, washed out the cavity, being careful that a considerable quantity of the irrigating fluid remained, packed with iodoform gauze—and saved my patient.

Now in this case, though the symptoms indicated the existence of appendicitis and the presence of pus, there was no reason for believing that the process of destruction had progressed to the extent that I found it when I opened the abdomen. I find in this clinical history, however, confirmation of what I have frequently observed in abdominal surgery, viz., that the peritoneum is a

most tolerant structure, and will bear much abuse before giving any sign. We usually think that a rupture of pus or any other fluid into the abdominal cavity must be attended with certain and definite symptoms of shock and collapse. My experience with appendicitis, and in abdominal surgery in general, does not bear out this expectation. I have more than once irrigated the abdominal cavity with salt solution, as a part of a secondary operation, causing little suffering; indeed, I have sometimes noted that the patient seemed to be soothed and quieted by the irrigation.

Case II. illustrates in even a more pronounced manner the value of making an early diagnosis in cases of appendicitis. I was consulted by telephone from out of town concerning a case of what, until the day of the consultation, had been regarded by the attending physician as a bilious attack, brought on in a naturally constipated child by eating heartily at some little entertainment which she had attended a few days previously. The patient was a girl, six years old. A few days before I saw her, and after the entertainment of which I have spoken, she awoke at night, having gone to bed perfectly well, with a colic, of no very pronounced type, attended with nausea and vomiting. This continued, with slight rise of temperature and acceleration of pulse, but nothing very marked for a child of that age, for five days. There was very little pain, and nothing local, as the attending physician, who is a most careful practitioner, assured me. Appendicitis was of course in his mind, but until the morning of the evening in which I was summoned to see the case there had been nothing definite enough upon which to base a diagnosis of appendicitis. Upon hearing of the case I made a diagnosis of appendicitis, and arranged to go out of town at once, prepared to operate, should I find it necessary to do so. I was not able to reach the patient until 10 o'clock in the evening, when I found well marked evidences of rupture, temperature 105 degrees, pulse thin and thready, 160, abdomen greatly distended, and the patient possessed with that peculiar restlessness of mind, with restlessness of the body above the abdomen, that marks peritonitis. They throw the arms about, move the head, and talk incessantly, but the body is fixed below the thorax. I have associated this condition with the reaction that follows the rupture. The shock depression has passed, and the stage of activity is reached. This is the beginning of septic intoxication, and will soon be followed by the depression of the poison

I operated as soon as the patient and the room could be prepared. I found the abdomen was full of pus, though not decomposed; the appendix sloughed off from the caecum, and lying free in the abdominal pelvis. An opening in the caecum corresponded to the attachment of the appendix. It was rather remarkable that the fluid did not contain faeces, inasmuch as the intestine was perforated. It was also noted that the intestine was quite empty, giving rise to the suspicion that there was an obstruction in the canal. Upon examination, however, this was found not to be the case.

The child recovered from the operation, and did well for ten days. The sinus was healing, and the packing had been removed. The temperature then began to run up, and her pulse to show signs of the presence of pus. Still there was no pain, and no local sensitiveness. The sinus was carefully examined, and found to be satisfactory. Though the case presented symptoms of malaria, especially as the patient lived in a malarial region, I felt convinced that pus was forming somewhere, and anaesthetized the child to make a diagnosis, for nothing could be detected without an anaesthetic. Under relaxation, I discovered a tumor in the left iliac fossa, and upon opening the abdomen in that region I came upon a hard, resisting swelling, so hard that at first I was at a loss to understand its true nature. It was entirely extra-peritoneal, apparently developed between the layers of the meso-colon of the sigmoid flexure. An examination through the rectum showed the tumor projecting into it, and almost closing the canal. So hard and unyielding was the swelling, examined between my finger in the rectum and my hand in the abdomen, that I still could not satisfy myself that I had to deal with a simple abscess only. Because of the deep intra-abdominal situation of the tumor, which would interfere with drainage, I opened through the rectum. In this way I removed over a quart of most foul pus. The tension of the walls of the abscess, for such it proved to be, was so great that the pus was forced to a considerable distance through the trocar. I enlarged the opening and maintained drainage by means of a tube and iodoform gauze. After this the progress towards convalescence was uneventful.

Now, in this case the symptoms also were masked, but not to the same extent as in the first case reported. And still I did not think that I would find quite so much destruction, or the disease in quite so advanced a state. The second abscess shows to me, even more plainly than the condition found at the first operation, the extent to which the disease had progressed, for I cannot think that it was the result of anything left over from the appendectomy, inasmuch as it was not connected with the seat of the original operation. That wound had healed, and if this collection of pus had been connected with or dependent upon the primary abscess, it would have discharged through it, being the place of least resistance. I therefore look upon this complication as an expression of a profound contamination of the system which antedated the first operation. The patient was pyaemic, and the clinical history shows the importance of an early diagnosis and prompt action in all suspected cases of appendicitis.

Case III.—I was summoned late at night to see the following case. A lad, 14 years old had until the previous day been in perfect health; that is, he had complained of nothing more than slight attacks of indigestion. On the morning of that day he complained of not feeling very well, and decided not to go to school. The indisposition was attributed to constipation and overindulgence in eating sweet food, and was so slight that the family physician was not consulted until the

evening, and then it was thought he could send medicine and, if necessary, call in the morning. The physician decided to see the boy in the evening. He found him with considerable abdominal pain and sensitiveness, though neither was well localized; some vomiting, but with a normal pulse and temperature. As the conditions continued, the physician was summoned at midnight. He then suspected appendicitis, and telephoned to me. I saw the patient in the early morning and found the abdomen tympanitic, with well marked peritonitis. A decided tumor could be felt in the region of the appendix, and the entire abdomen was extremely sensitive, even though the patient was well under the influence of morphine administered the previous evening by the attending physician. The boy's expression was bad, and he was evidently suffering from acute but profound toxaemia. Temperature 100.2 degrees; pulse thready, and 160. I operated without delay. Upon opening the abdomen it was found full of pus. The appendix was gangrenous, and ruptured. The inflammation had spread up the colon so far as to cause degeneration of its walls, and rupture was about to take place. A large piece of omentum was gangrenous, and the base of the caecum at the point where the appendix is given off required resection, as degeneration had progressed so far as to render it unsafe to leave it in the abdomen. One of the most remarkable features in this case was the condition in which I found the intestines. The small gut was literally covered with inflammatory lymph. In order to remove this I was obliged to lay the intestines on the abdomen, and wipe them with dry sponges. Under this treatment the lymph peeled off in pieces several inches long, leaving the peritoneum highly congested, but only in a single place destroyed. This point I covered with omentum, securing it to the intestine with very fine catgut. I packed the abdomen with many yards of iodoform gauze, and the boy recovered without complications.

Now here is another case—and they all present similar conditions—in which the early symptoms did not indicate the grave nature of the disease. That the case was one of appendicitis there was no question, but we will remember that the boy had been complaining only twenty-four hours, and that the pulse and temperature remained almost normal until just before the operation. We may well ask, therefore, what are the signs that indicate the necessity for the operation, and how shall we tell when we are to operate and when we are to hold our hand? It is evident that the most grave conditions may exist in the abdomen without giving evidences that we recognize as diagnostic; the abdomen may be full of pus, and the patient walk to our office for consultation; an appendicial abscess may rupture, and the accident be diagnosed as indigestion. Therefore, if we have reason to believe that the appendix is diseased, true conservative surgery prescribes its removal. The fact that the appendix is the seat of defective drainage—for that is what it comes to—is, I think, sufficient ground for active interference on our part. Of one thing we may be sure, the appendix will never regain its healthy attitude in relation to the other organs in the abdomen after it has been sufficiently irritated to direct our attention to it as the seat of disease. It may be months or years before the pathological process is continued, but from the incipiency of the attack it is ever thereafter a damaged organ, and as such deserves no consideration at our hands.

Case IV.—Still another case occurs to me. A strong, healthy gentleman, about 40 years old, a high liver and man about town, engaged in active business, had for several months been feeling "below par." This, however, was attributed to his dissipated habits, until several rather sharp attacks of pain in the region of the appendix directed attention to that organ. He was sent to me for examination, and I found only slight sensitiveness of the appendix, which, however, could be well mapped out. The case did not seem to be urgent, and inasmuch as the patient had some business matters to attend to before the operation, which I advised, and which he was desirous to have performed, it was delayed for one week, during which time he transacted his business every day without inconvenience or recurrence of suffering. The day before the operation he called at my office for some final directions, and transacted business until that evening, when he began the preparations for the operation on the following day. In this case pulse and temperature were normal, even at the time of the operation, and I have rarely been more astonished in my professional experience than when I opened the abdomen, and fully a quart of foul pus, and a large quantity of necrosed tissue poured out. Adhesions existed in every direction. The appendix had sloughed off, and was with difficulty found; the intestines in several places were highly congested and purple, suggesting the advisability of resection. This, however, was avoided by placing the intestines in hot sterilized towels, save in one small spot, where I considered it best to reinforce the muscular wall by bringing the peritoneum together, thus forcing a spur into the caliber of the canal. This patient recovered, but I found great difficulty in moving the bowels, and for a few days felt that the case might go wrong. These cases are not presented as unusual examples of appendicitis, or remarkable operations or results, I believe them to be quite the contrary. But I also believe, and with that object I report them, that they serve to emphasize the importance of making an early diagnosis in appendicitis, and the necessity of promptly removing the diseased appendix.

I would like to direct your attention to another class of cases, not strictly appendicitis, in which the appendix plays an important part, and is indeed the chief factor. I refer to certain obscure abdominal diseases in which there is more or less pain, generally in the hypogastric region, slow digestion, as shown by acidity, and enormous accumulation of intestinal flatulence. There is invariably associated with this condition obstinate constipation, general debility with loss of strength, and a nervous irritability, for which there can be found no adequate cause. Though these patients do not

refer their trouble to the appendix, and indeed are unwilling to have an examination of the abdomen, such an examination shows the appendix to be too well defined for health, slightly sensitive, and lying like a *bean pod* in the right iliac fossa. No consciousness of the appendix exists, but the patient will tell you when it is palpated. I have had several such cases that have been cured by removing the appendix. The patients present no symptoms of appendicitis, though the removed organ has always shown marks of inflammation, at least it is adherent, usually at its distal end, and such a condition could not exist save as the result of inflammation. Certainly there has been nothing active in the cases that I have operated on, though in the light of the clinical history of the appendix it is impossible to say just what might have been the issue of such a condition if left unmolested. From what we know of the behavior of the appendix, we are justified in the suspicion that the condition associated with the cases under consideration may form the initial step in the final one of suppuration and rupture of the abscess, but the point that I wish to develop is, that the symptoms in these cases are not those that are usually associated with appendicitis, or that would usually direct one to the appendix as the seat of the trouble.

The first case that I will mention is that of a young gentleman who for several years had been suffering from what he had been told was indigestion, and for that he had been treated. He could eat nothing without causing the most intense pain in the stomach, and from inanition had become greatly reduced in flesh. He had been obliged to give up his business, and was in a most deplorable mental condition when he consulted me. In the course of the thorough examination which followed, I discovered a sensitive spot over the appendix, though until I made the examination he was not aware that he had an appendix. By exclusion of every other cause of his condition, I offered appendectomy as the only cure I could make of his "dyspepsia." He readily consented. I found the appendix small, deeply seated, and its distal end adherent. The canal of the organ was unusually large for its size, permitting the accumulation of faeces, which it will be remembered do not belong in it. Other than this there was no evidence of previous derangement. The operation was of the simplest, and the recovery was prompt, the patient leaving my hospital in less than three weeks. The removal of all his symptoms was equally prompt and radical. From the time of the operation his appetite and digestion improved, and constipation, which had been for years a most troublesome feature of his case, the bowels requiring constant attention, was entirely cured, an action taking place daily without assistance.

Another case is quite as marked. The gentleman, however, had had one very slight attack of appendicitis—at least I conclude so, from his account of his case—though it was so slight as not to be recognized at the time. His other symptoms were very similar to those of the first case. I operated, and found the appendix rather long, and, as an illustration of the anomalous anatomy of the organ, its distal end penetrated the mesocolon, in which situation it was firmly fixed, and from which it was dissected with some difficulty. There were slight evidences of former peritonitis, but further than this there were no pathological changes.

The operation was followed by the most complete recovery. Especially, constipation, which had become chronic, was entirely cured. In this connection I will say that the cure of constipation, which is such a constant symptom of the early stages of appendicitis, even of the mild cases that are not operated on, has always followed the successful operation in my hands.

A still more marked case of constipation cured by removing the appendix was that of a theological student, who would pass four and five days without any action from the bowels, and then could be relieved only by the most active purging. He was willing to submit to anything that offered the least prospect of a cure, and from my experience in similar cases, and a slightly sensitive spot I found over the appendix, I felt justified in proposing this treatment. I operated, and found the appendix in a condition similar to that in the first case. The operation was followed by a perfect cure of the constipation.

Now I do not wish to be understood as advocating appendectomy as the routine cure for every case of indigestion and constipation; I simply relate these cases to show how close is the connection between an irritated appendix and the other abdominal organs, and to point out the necessity of making a thorough examination of all the organs, and of giving to each one its place among the factors of causation, no matter how remote it may seem to the general condition.

DISEASES OF JOINTS.

By E. Franklin Smith, M.D., New York.

CLASSIFICATION (pathologically considered):

(1) Inflammatory.
(2) Degenerative.
(3) Neoplastic. (Violence considered under Injuries.)

Primary affections of joints are shown, in order of frequency, as follows: (1) Synovial membrane, (2) bones, (3) ligaments, (4) cartilages, depending upon the physiological activity of each structure.

Simple Synovitis Due to Causes Operating from Without.

Primary: Due to local primary disease.
Secondary: Due to some general condition.
Acute, subacute or chronic.

1. Simple Primary Acute Synovitis.

Cause.—Over-use; injury; cold.

Pathology.—Hyperaemia, varying from a flush to an active congestion, due to vaso-motor paralysis, and shown by increased heat (greater amount

of blood), redness (same cause), swelling (increased amount of blood and exudation of serum), tenderness and pain.

Opening joint.—Syn. memb. swollen, injected, colored, in folds possibly, with increased amount of fluid (normal, or thinned by effused serum, or turbid from leucocytes and lymph).

Symptoms:

Subjective: Pain on movement, sense of heat, throbbing, and little pyrexia.

Objective: General swelling, fluctuation, redness, altered position.

Diagnosis.—Malignant tumors (slower onset). Subacute and chronic forms (slower onset). Haemarthrosis (pouches of joint distended within an hour; heat, redness and swelling not so marked; if coagulation, a tearing crepitation on palpation is characteristic; aspirator).

Treatment.—General.

Sthenic cases: Rest; salines; antimony to relieve vascular tension.

Asthenic cases: Purgatives with caution; tonics and stimulants; anodynes and sedatives for the pain.

Treatment.—Local.

Blood-letting: Leeches, wet-cupping.

Cold: Ice-bag, evaporating lotions. (If these fail, hot fomentations, with or without belladonna.)

If much effusion, aspirate.

2. Simple Subacute Synovitis.

Causes: Same as above; differ in degree only.

Chief complaint: Joint feels "stiff" and "weak."

Treatment.—Same general principles as the acute. Leeches, cold, frequent blistering, absolute rest by splints. Aspirate often may fail, so blister frequently and strap firmly.

If this fails, aspirate again and wash out with mild antiseptic (2½ carbolic, or weak iodine). Massage.

3. Simple Chronic Synovitis.

Differs from 2 except in degree. Defective vitality. Persistence of congestion leads to plastic thickening, irregularly hypertrophied in parts, especially borders, pendulous masses hanging over sides of joint, so modifying movements.

Symptoms.—Same as 2, except pendulous masses interfere more with function.

Treatment.—Same as 2, except as regards the plastic matter. Strapping, friction, painting with iodine, mercurial inunctions, rest, followed by passive motion, elastic bandage.

If joint remains weak, painful and swollen, freely open and remove pendulous masses; follow by change of air, good diet, massage and douching, tonics, sea-bathing.

Synovitis Due to Causes Operating Through the Blood.

Classification.—

(1) Synovitis of septic infection.
(2) Of syphilis.
(3) Of tubercle.
(4) Of gout.

1. Acute Septic Synovitis.

Cause.—From foul suppurating surfaces—urethra (gon.), throat and ear (scarlet fever), intestines (typhoid), uterus (puerperal), etc.

Pathology.—Hyperaemia, increased tension, distended joint. Effused serum usually turbid or actual pus due to invasion of organism; organisms cannot escape on account of damaged absorbents, accumulation of septic matter takes place, reacting on surfaces around, intensifies hyperaemia and soon suppuration follows.

It would seem that the organisms prevented the formation of fibrin, for the syn. memb. appears to be liquefied, leaving them clean and smooth without a trace of lymph.

Symptoms.—More than one joint affected simultaneously. May go from one joint to another.

Dusky flush of the skin. Rapid destructive changes accounted for by toxic agent acting as a solvent upon fresh plastic material which otherwise would limit the disease.

Subjective symptoms.—High, oscillating temperature, rigors, delirium, restlessness, great wasting, often vomiting; in fact, the symptoms of marked pyaemia.

Treatment.—Same principles as simple acute form with suppuration; early evacuation. Washing out cavity with large quantities of sterilized water better than strong germicides.

Subacute form.—Differ only in degree.

Symptoms.—Same only less severe. Temperature not so high, does not oscillate, rigors few or absent. Pain often more severe. Often observed in deep tendon sheaths and smaller joints of ribs, or wrist or ankle or syn. bursae.

Treatment.—Need not be so radical. Hot fomentation, belladonna paint, immobilization. If this fails, open joint, wash out and drain.

Chronic form of septic synovitis.

Grave secondary structural changes are to be feared. Syn. memb. becomes thickened and fibrous, cartilages rough, ligaments shrink or contract, with deformity.

Treatment.—If other means fail, open, wash and drain. By position prevent bones being dislocated while ligaments are softening and get good position if anchylosis follows. When parts recover, passive motion, cold douches long continued.

2. Syphilitic Synovial Disease.

Pathology.—Slow hyperplastic change in the syn. memb. It is a small celled infiltration—in other words, a diffused gummatous formation. When cells are aggregated in masses it is a true gumma.

In both syphilitic and tubercular masses we may find: (1) A return to healthy state, with or without thickening. (2) Liquefaction. (3) Granular material may caseate, owing to fatty degeneration. (4) May dry up and cretify.

Symptoms.—Subjective: Not well marked in early stages. Pain, weakness or stiffness.

Objective: Swelling, possibly localized, which is elastic or doughy to the touch (fresh granulation tissue, elastic; softening gumma, doughy; if liquefied, fluctuation).

Other parts of body show unmistakable evidences of syphilis, old circular scars, "pegged teeth," interstitial keratitis, etc.

Treatment.—Mercury, small doses for long period. Improve general health. Massage and douching. In aged and cachetic, iodide of ammonium and potassium instead of mercury.

3. Tuberculous Synovial Disease.

(Assume that general pathology of tubercle is understood.)

Pathology.—Local influence to lower the vitality of the part, such as blows, strains, cold, wet. These operate in three ways:

(1) Lowering vitality of the part.

(2) Injuring its nutrition by inducing active or passive hyperaemia.

(3) With increase of blood to the part, more tuberculous poison sent there.

Changes in the syn. memb.

If rapid invasion, active hyperaemia and external swelling.

If slow invasion, little signs of inflammation are shown.

If bacilli scarce, but resistance of tissues great, the most chronic of all forms of syn. is produced.

Symptoms and Morbid Changes in the chronic form.

Chronic tuberculous synovitis (white swelling) show, first, stiffness and swelling, weakness. Slight sense of heat. With time, swelling increases and weakness becomes more marked. If left alone, joint becomes flexed and otherwise deformed. "Pulpy swelling" forms, due to granulation tissue, the product of chronic inflammation with exudation of leucocytes.

At this stage a section will show tubercle or "tubercle systems." In favorable cases the process may here cease.

As a rule further changes go on, cells become heaped up around the centers of infection, the latter are further removed from the blood supply, undergo fatty degeneration, or caseation, followed by "cold abscesses." These may burst in the joint or form peri-articular abscesses. Often the whole cartilages are destroyed and the bones laid bare.

It is usual to find more disease in a joint than the symptoms would lead us to expect.

Treatment.—Practically same as for syphilitic disease here. Improve vitality of the parts. Diet, fresh air, clothing, exercise, etc.

Locally: Iodine or blisters in early stages; rest if much pain. Actual cautery. Mercurial inunctions with strapping. Elastic bandage followed by massage. Iodoform emulsion into joint. "Hyperaemic engorgement," *i.e.*, elastic bandage above and below affected part, leaving the latter bare.

4. Gouty and Chronic Rheumatic Joint Affections.

Gout.—Urate of soda, the result of faulty metabolism, is deposited in those tissues of low vitality, cartilages, ligaments and bones. It is passed in solution and deposited in crystalline form. It provokes hyperaemia.

Symptoms.—Hyperaemia, accompanied by heat, redness and swelling, with throbbing pain at night. Found in the metaphalangeal articulation of the great toe, knee, elbow, wrist and ankle.

Treatment.—Diet, diluents, laxatives, colchicum.

Locally: Rest, elevation and protection, wrapping in moist cotton-wool; later, massage. (See Medicine.)

Chronic Osteo-Arthritis (Arthritis deformans, Rheumatic gout, etc.).

Pathology.—In early stages articular cartilages are roughened and fibrillated, the fibrils standing vertical to the surface, due to degeneration of the cart. cells, their removal leaving behind nothing but the intercellular matrix in the form of columns and fibers. This degenerative change leads to actual loss of substance in the cart. These cart., being weakened, are gradually worn away in the movements of the joint and at last only the two surfaces of bone are left in contact.

Irregular swellings are noted around the used-up cart., due to hyperplasia, probably explained by irritation from movement or from poison. With this hyperplasia there is hyperaemia and increased secretion.

As disease advances the bone becomes hyperaemic, new osseous tissue is thrown out, especially at periphery. The hyperaemia leads to softening of bone by rarefaction, and soon becomes altered in shape. "Tallow drippings" (Billroth) form. Syn. memb. gradually thickens and becomes roughened and throws out pendulous growths, which may be torn off by joint-movements and so form loose bodies; or they may become ossified or calcified.

This new bone gives the lumpy appearance and gives rise to the grating.

In some cases the degenerative process progresses more slowly, the inflammation is of a lower degree of intensity, which, instead of leading to softening, is the cause of a sclerosing osteitis. This hardened bone has a harder surface at the worn points of contact, and frequently becomes polished.

Symptoms.—In earliest stages some creaking in the joint, with insecurity in using it, little pain and no tenderness.

In later stages dull aching pain aggravated by motion. Greater creaking or actual crackling and lumpy enlargements made out. Some temp. without redness Movements of joints are interfered with, both from pain and alterations in shape.

Ultimately, if joint surfaces become locked, movement is arrested and pain ceases except at night.

Treatment.—Unsatisfactory. Nourishing food, warm clothing, fresh air, tonics. Encourage action of skin by Turkish baths, massage.

Locally: Warm covering, douches and hot baths, counter-irritation; anodyne applications to relieve the pain, as opium or belladonna, also carbonate of lithium and iodide of potassium. Mineral baths.

(To be Continued).

UTERINE FIBROID WITH OVARIAN CYST.

By W. F. Morgan, M.D., Leavenworth, Kans.

IN the May issue of New York Medical Times I gave a brief description of a quite remarkable ovarian tumor, which chanced to attract the attention of Prof. A. H. Cordier, of Kansas City, Mo., who promptly offered to operate on the case, and thus give my patient her only chance of escape from a lingering and painful death. The patient finally decided to run the risk of an operation which—from having been so long delayed—she well understood to be of an extremely hazardous character. Having prepared her for the ordeal as carefully as possible in her untavorable environment, I took her to Cushing Hospital, Nov. 17, where she received very careful and conscientious care from the nurses in attendance upon her. Although the prognosis was extremely grave, Dr. Cordier, yielding to a sense of duty and the earnest entreaty of the patient, consented to make the attempt to remove the tumor, and on Sunday morning, Nov. 20, assisted by Drs. Van Eman, Green, Fite, Lane and Morgan, and in the presence of several other physicians, the patient was placed upon the table. It was with considerable apprehension I began the administration of chloroform; for the three preceding months the patient's heart had required strychnine nit. and digitalis to relieve attacks of irregular and feeble action; but to the agreeable surprise of all, only about one ounce was needed for an operation lasting over an hour. This satisfactory action of the anaesthetic chosen was attributed largely to the practical suggestions made in a late monograph by Dr. Robert H. M. Dawbarn. About 40 minutes before the operation was begun I gave hypodermically 1-40 gr. strych. nit. and 20 minutes later 2¾ gr. morph. sulph. and 1-100 gr. atrop. sulph. The large amount of morphine was given because of the patient being a confirmed user of the drug. The cyst being emptied of its fluid contents (about 15 gallons) and portions of the morbid growth removed (estimated to be 10 pounds), a careful examination revealed the fact that further procedure was not advisable on account of very firm and extensive adhesions in the left pelvis, to the left kidney and bladder, to the intestines, stomach and omentum—the latter being largely absorbed—and extensive patches of adhesions on both surfaces of the peritoneum. The vessels found within some of these adhesions were so large and numerous that it was evident, in the opinion of Dr. Cordier, that a complete removal would cause prompt death by hemorrhage. This opinion being concurred in by all the other physicians present, the abdominal wound was closed, ample provision being made for drainage, and the patient put to bed, surrounded by bottles of hot water, and stimulants were administered. Two or three hours after the operation the pulse became very weak, irregular and thready, the breathing embarrassed and the thought of internal hemorrhage suggested itself. However, there was a favorable reaction and hopes were aroused of a possible recovery.

About 48 hours after operation peritonitis developed, the discharges became excessively offensive, and death ensued on the sixth day. Drs. Van Eman, Carpenter, Walter, Langworthy and Morgan were present at the necropsy. Upon removal of the remaining portions of the tumor it was found to be of various consistency in its several parts, one being studded by stony concretions, another was bony and another cartilaginous in structure. The weight of this remnant was 26 pounds. The total weight of the fluid and solid contents of the growth was estimated to be about 156 pounds, while the normal constituents of the emaciated body were estimated to be 75 or 80 pounds. The gall bladder was enlarged to a length of four inches and a diameter of one inch. Seven months before the operation the patient weighed 214 pounds; but as her size constantly increased, it was supposed at the time of operation that she weighed about 240 pounds, including tumor. Hence we had an example in which for each pound of the normal fluids and solids there were two pounds of diseased tissue warmed, nourished and supported by the vital organs.

Having observed the progress of this disease during the past ten years, I judge that life might probably have been prolonged for another year had there been no attempt to relieve the patient of a burden which had become to her intolerable. But as every day was filled with suffering, there seems to be no just ground for regret that the attempt was made, either upon the part of the patient's friends or the physicians who simply did their duty under very trying circumstances.

CLINICAL ILLUSTRATIVE CASES OF HYSTERIA, WITH POINTS ON THE TREATMENT OF THIS DISEASE.

By Francis X. Dercum, M.D.,

Clinical Professor of Nervous Diseases, Jefferson Medical College, Philadelphia.

Our first case for discussion is a young woman who has what is known as paroxysmal hysteria. The attacks in this person are well-marked and follow a regular sequence of events, but there is one point in regard to them that is rather contrary to the general rule.

The general principle laid down is that one point of differentiation between epilepsy and hysteria is the fact that unconsciousness is found in the former and not in the latter. This rule is not always true, which is illustrated by this case; the patient avers that she is unconscious during her attacks and does not remember what persons were present or what she does during the existence of the attack. Many patients make statements to this effect, the reasons for so doing being obvious to every one. But there seems to be no doubt that this girl really passes into a state in which consciousness is obscured or perverted to a considerable degree.

Before the attacks she talks low and more slowly than common, seems worried and is more irritable than she generally is. These premonitory symptoms last anywhere from a few hours to a day or two before the paroxysm comes on.

The hands of the patient are cold, clammy and cyanosed. I speak of this in order to impress the fact that this condition is a genuine disease and must be respected and treated as such. No person could go through a set of classical symptoms such as these people do in their attacks if they were merely making an effort to do so. Such depression of the peripheral circulation as this patient ex-

hibits must come from some constitutional trouble or cause, and not as a mental delusion or shamming. Then often accompanying this are digestive disturbances, and sometimes there are found hemorrhages under the skin and other manifestations of perverted processes in the body. It is interesting to note in this connection that these attacks are more common during the menstrual period. This would indicate that the general condition of the system has much to do with the occurrence of the paroxysms and that they are thus more frequent when the whole strength of the body, as it were, is centered upon another process. These cases are very troublesome as to the mode of treatment to be adopted. Before speaking of this subject I wish to present another case as illustrating the fact that we certainly find cases of hysteria in the male sex. This man, who is a teamster 40 years of age, frankly admits that he is perfectly conscious during his attacks, but is unable to speak while they continue. One year ago he was at work which necessitated much heavy lifting. He was taken ill with diarrhea and vomiting and was confined to bed for a number of weeks. He partially recovered from this attack, but has not been able to work any since. During the last nine months he has been subject to these convulsive attacks. When he was admitted to the hospital I rather thought he was subject to epilepsy from the use of alcohol, exposure or the like. But I saw him this morning during an attack, and he has not the classical symptoms of this disease; coupled with the fact that he is conscious, the case is a clear one of hysteria. These cases are rendered more difficult to the general physician because of the fact that he seldom sees the patient in an attack.

Now as regards the treatment of these cases, which, as I have said, is an exceedingly difficult question. My own experience has been that nothing will help such patients unless the general health has been elevated to its highest point. I care not what is used for this purpose in particular cases, but this must be done in some way, or after treatment is of no avail. Rest cure, travel, anything that is adapted to the case may be used; I find that for the vast majority the rest cure gives the best results. Put the patient in bed and keep friends away for a time. Then food of the most nutritious and easily digested varieties should be given in quantities gradually leading up to even forced feeding, and it is remarkable what large amounts of food can be taken and assimilated in many of these cases. Then to keep up the general circulation massage should be employed. As the patient grows stronger and better this can be followed by Swedish movements in the room, and still later by plenty of outdoor exercise.

A great deal is accomplished in these cases by withdrawing the patients from suggestive surroundings and putting them among strangers. This has a curious inhibitory effect on the general behavior of the patient, and especially on the liability to give way to an attack when it is felt to be threatening. With even a strange nurse they are not so apt to give way as soon as if in the presence of the mother or others of the family; there they find sympathy and now they will receive the attention that only members of the household prompted by affection can give, and they think they may as well give way entirely and have the attack over. They will not do this among strangers, but will be more on their guard to prevent such attacks, and will resist them as much as possible. In addition to the measures which have been mentioned, and in the same line of treatment, the patient should be taught to think of other things, to divert their attention from themselves and their condition. To this end they should read suitable matter or be read to.

Thus in conversation, in reading, in listeping to the nurse or companion reading, in exercise, etc., the entire day may be filled up and a gradual change for the better induced.

Six Thousand Cases of Fracture Treated by Bardenheuer's Extension.—Loew (*Deutsche Militaerarztl. Zeitschr.*, June, 1898; *Med. R. of R.*) gives the result of ten years' experience with this method at the Koelner Buerger Hospital, embracing over 6,000 cases. Bardenheuer, he states, was the first surgeon to overcome many of the difficulties of the extension method. The details of the technic are too long to be quoted in full, and may be found in Bardenheuer's published works.

The theory of the method is to obtain the most extensive surface possible for the attachment of the adhesive slips. To take as an illustration a case of fracture of the tibia: A strip of sail-cloth plaster is attached at its superior extremity a hand's breadth above the knees at the outer side of the thigh, and continued along the leg to the foot-sole, where it is allowed to form a stirrup, and is then continued up the inner aspect of the leg to a point opposite its inception. This long, double strip is fortified by a number of circular strips of perforated plaster. A weight of 7 or 8 kilos. is attached to the stirrup, which is completed by a bit of wood. The foot of the bed is raised 20 to 30 cm. for counter-extension. A sling of adhesive plaster is then applied just above or below the break, according to the tendency of the fragments to separate, and to this sling a cord and weight of 2 to 4 kilos. are joined and hung over the side of the bed, in a direction perpendicular to the axis of the limb. In certain cases other straps and weights are added to overcome rotation. After ten days the dressings are changed throughout.

The advantages claimed for the method are as follows: The site of the fracture is exposed, and contusions, etc., when present, are easily dressed. Exact coaptation of fragments is obtained, and shortening and false joint do not result.

Loew says that the success of the method has been truly wonderful at the Buerger Hospital. The rule has been short period of treatment and perfect recovery. A false joint has never occurred. Union often occurs by the tenth day, so that a limb may then be placed in a long splint.

Apomorphine in Hysteria and Whooping Cough.—Referring to hysteria, Dr. F. J. Campbell writes in the *Medical Record* that "Apomorphine here is the remedy *par excellence*. It may almost be classed as a specific in the acute hysterical conditions. There are few clinical pictures which present such wonderful and sudden contrasts as that of a patient with teeth clenched, muscles rigid, with opisthotonus, or throwing herself and her anxious attendants about, transformed in three or four minutes by one-tenth grain of apomorphine hypodermically into a docile, relaxed, limp, and vomiting individual, her pride and alleged pains gone together, and a restful sleep in store for her after the emesis is over. I have never seen any unpleasant complication resulting from the use of this remedy, though I have depended almost solely on it for six years and have used it in several cases in which pregnancy coexisted. Instead of a hypodermic, a dose of from one-tenth to one-fifth grain may be given by the mouth, and a satisfactory though less prompt result will be obtained. I regard apomorphine as by far the most prompt, reliable, and, both to the patient and to the physician, satisfactory drug in the treatment of this condition of which I have any knowledge."

In the letter immediately following, Dr. R. Abrahams enlarges on "The Great Value of Apomorphine in Whooping Cough." He says: "It does not remove the cause, nor does it shorten the duration of the disease—none of the vaunted remedies does; but it palliates most of the distressing symptoms, such as the frequency and severity of the paroxysms; it induces better rest at night, and, paradoxical as it may seem, it overcomes in some instances the tendency and inclination to vomit. The two remedies which are conspicuous to-day in the treatment of whooping cough are belladonna and quinine, but the belladonna, in order that it may do good, must be pushed to the point of tolerance, which is practically equivalent to the degree of poisoning; and quinine is possessed of that horribly bitter taste which is objected to by adults and dreaded by the young, to say nothing of cinchonism and gastric irritation which will surely result from its long use. Apomorphine is free from all these bad features." The following formula is recommended:

℞ Apomorphinae hydrochloratis.....gr. ss.—1.
Acidi hydrochlorici diluti.....gtt. x
Syrupi.....℥ss.
Aquae menthae piperitae.....℥iss.
M. S.—A half to one teaspoonful every two hours.

The *Mexican Herald* says that they are inoculating healthy locusts down in Argentina and letting them loose to communicate a species of locust cholera to the myriads that swarm over the land.

The Medical Times

A MONTHLY JOURNAL

OF

MEDICINE, SURGERY, AND COLLATERAL SCIENCES.

EDITORS:

ROBERT GUERNSEY, M. D. ALFRED KIMBALL HILLS, M. D.

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Changes of standing advertisements and communications in regard to that department, should be addressed to BENJ. LILLARD, Advertising Manager, 108 Fulton St., N.Y.

"I have never been in a hurry; I have always taken plenty of exercise; I have always tried to be cheerful, and I have taken all the sleep I needed; and now while old in years, I am young in spirit and active in body."—JAMES FREEMAN CLARKE.

STATE HOSPITAL FOR CONSUMPTIVES.

THE State Charities Aid Association in its annual report urges the desirability of collecting consumptive patients in a State colony in the Adirondacks or some other suitable location in the State. The public hospitals in this city are crowded with phthisical patients, many of whom might be cured, or at least materially benefited—as well as those living in comfortable homes or traveling from one location to another where the climate might be thought to best suit their condition—if collected in a hospital specially adapted for the purpose and under the direction of competent medical advisers. The suggestion in the report is so practical and appeals so strongly to the humanity of the public, and its great need, that no sooner was the suggestion made than a bill was introduced into the legislature to carry it into effect. This bill authorizes the establishment of a sanitarium in the Adirondack forest preserves for the treatment of cases of tuberculosis, and provides $150,000 for the grounds and $200,000 for the erection and equipment of the buildings, which are intended to accommodate 200 patients, and are to be ready for occupancy in two years. Two examining physicians are to be appointed in each of the cities of New York, Buffalo and Syracuse to examine patients and admit them by certificate. Patients able to pay, or having friends able, will be expected to pay a small sum, but the destitute will be received free.

In different parts of Europe during the past few years special attention has been given to the treatment of consumption in sanitariums or hospitals carefully located, with, in many cases, such marked success that the directors of our new institutions will find great advantage in studying closely their methods. One of the most noted of these institutions is the one established about ten years ago by Dr. Walther at Nordrach, in the Baden Black Forest, in Germany. The location of the sanitarium is in the depth of the forest in a rolling country, about 1,500 feet elevation, away from any large town which might otherwise interfere with the purity of the air and water, but possesses no special advantage in point of climate over any other healthy locality. Dr. Walther says all that is necessary to carry out his system is a place where pure air is to be had, situated well away from town, at a fair elevation, and the men to see that the system is properly carried out. It is pretty well settled now that consumption is not directly hereditary, either in human beings or in cattle. So long as the body is in health, well developed, nourished and cared for, there is but little, if any, danger from tuberculosis. It is only when the system gets below par through some of the hundred and one diseases which tend to reduce it that the danger comes. Then the disease germs, which are everywhere, are ready to take hold of their victim at a time when the blood agents have not the vitality to overcome and expel the intruders.

To the question, What do we know about tuberculosis? Dr. Walther answers: "It is not hereditary; it is not developed spontaneously, but directly by infection, either by food, inhalation or other such means; that it is not necessarily a fatal disease, and that not a single life should be lost if only the proper means of grappling with it are employed."

The three great factors depended upon to accomplish the result include no drugs, but in an intelligent and faithful observance of the laws of nature. The first factor is persistent and abundant feeding. Dr. Walther claims that there can be no cure without weight gaining, and therefore stuffs his patients to the utmost capacity. The food is of the ordinary kind, consisting of plenty of milk, fat of all kinds, meats, potatoes, vegetables, butter, bread, cheese, fruits, sweets, etc. With the regular habits of living, the pure air and pleasant companionship, with no care or worry, it is astonishing how much food a patient can consume with no inconvenience, but even a relish and with a constant increase of flesh. This overfeeding, causing an increase in flesh, brings with it also an increase of strength

and a gradual cessation of cough and a corresponding rest and expansion of the chest and a healing of the lungs.

Breakfast is at eight, dinner at one, and supper at seven. Patients are obliged to be in their rooms an hour before their meals, and to rest for that time reclining full length on their couches.

The *second* factor in Dr. Walther's system is a regulation of the amount of exertion and rest for each individual, as he says more consumptives hurt themselves by doing too much than in any other way. Each patient takes his temperature in the rectum four times a day, and notes it in a chart for the inspection of the physician who visits him three times a day and directs his exercise and rest. If there is fever the patient is kept in bed, weeks or months if necessary, until the temperature becomes normal, but all the time the feeding is kept up. Walking is generally up hill and always at a snail's pace, so that the lungs are exercised, strengthened and healed with but little exertion or fatigue. These walks are increased in length as the patient becomes stronger, sometimes extending ten miles.

Ten hours are required in bed, retiring at nine and getting up at seven. If the patient is not sleeping he is resting, but after a time his sleep is usually quiet, continued and restful.

The *third* factor is "*pure air*," and this the patient has in abundance at all times, day and night. The casement windows are kept wide open summer and winter, so that his life is really an outdoor life, the temperature being alike wherever he is, out of doors or in his room. No ill effect is experienced from this exposure, but through it the cure is very much facilitated, it is thought, and it becomes an important part of the system. Whatever may be thought of this system in theory, it has certainly in the hands of Dr. Walther worked well in practice, as the scores who have visited his institution as a last resort have left it in a few months entirely recovered, and after some years have had no return. It will be seen that the course is systematic, followed up steadily and persistently with every condition carefully noted and acted upon by men of brains thoroughly trained in all the details of their work. It remains to be seen whether all the results anticipated in tuberculosis will be realized, but it is very evident in any system of treating this disease, some of the ideas of Dr. Walther will be of the utmost importance.

THE DEATH-RATE IN THE SPANISH WAR.

WHATEVER blunders may have been made in the recent war—and some of them were certainly inexcusable from every standpoint, so far as the transportation of supplies were concerned—the loss of life in battle, owing in part to the rapidity of action, was much less than any other war in modern history. With volunteer troops fresh from civil life, unaccustomed to the details of army life and the hardships which cannot at all times be avoided, landing in a tropical country in a rainy and malarial season, there must, of course, be an immense amount of sickness. And yet Deputy Surgeon Gen. Smart, in his report, shows by statistics from the records that in the six months of our war with Spain there was less, by one-half, mortality and sickness among our troops than during the corresponding six months of the civil war, and even less hardship experienced on the march and in the camp. There is no doubt, however, if there had been less of politics in the appointments and more of a thorough appreciation of fitness, there would have been very much less sickness in the camp and a very much smaller number returned to their homes with broken constitutions and failing health. In view of past experience we cannot urge with too much emphasis that in the reorganization of the army the medical service shall form a department by itself, under no responsibility to any political leaders, but thoroughly organized to carry on its work with the greatest efficiency.

THE BROWN BREAD FAD.

SINCE the gospel of vegetarianism was first proclaimed in America by the Rev. Sylvester Graham, some sixty years ago, the unquestionable superiority of whole wheat meal over fine flour as a bread-material has been taken for granted by every succeeding school of dietetic reformers and strongly advocated even by leading medical authorities. In the latest reports of St. Bartholomew's Hospital, however, we notice a very interesting communication by Drs. Lauder-Brunton and Tunnicliffe, in which the opposite position is maintained on grounds which seem to them incontrovertible. While the authors admit that regarded from a purely chemical point of view the nutritive value of brown bread is greater than that of white, they contend this is not so when considered from the physiological side. The authors point out that it is absurd to take the mere chemical composition as an index to the value of a food stuff, as "a stick of charcoal, the atmospheric air, a little water, some sea salt, contain all the elements of a typical diet." Hence the greatest importance attaches not only to the composition, but to the way in which the various constituents are combined so that they can be readily and easily assimilated. The con-

clusions that the authors come to are mainly that, although brown bread, on account of its large percentage both of mineral matter and fat-forming constituents, is chemically superior to white bread, yet these constituents do not so readily pass into the blood as in the case of white bread, and that weight for weight white bread is more nutritious than brown. In special cases, where there is a deficiency of mineral matter, and especially in cases of growing children, when large quantities of these are required for production of bone tissue, brown bread is more useful, but even in these cases, if white bread is used these mineral salts, and especially salts of calcium, must be supplied by other means. We shall stick to our entire wheat bread.

MEDICAL DEPARTMENT OF THE NATIONAL GUARD.

THE new code abolishes the office of Surgeon General of the National Guard consequently Gen. Terry, who has served through two administrations, is the last of the Surgeon Generals of the State. The improvements Gen. Terry has introduced into the medical department have been of marked value and added very much to the efficiency of the service. When he entered upon the duties of his position the Guard was without an ambulance. The State now has one for each of the five brigades of the Guard. Every regiment had its stretcher, peculiar to itself, and many of them were very poor affairs, being simply two poles and a piece of canvas. Gen. Terry invented one which was unique in its having a mechanical pillow, and this Gen. McAlpin, the previous Adjutant General, named after the Surgeon General. The medical and surgical chests, of which there is an example at the armory in this city, were adopted through Gen. Terry's efforts and were the result of ideas which he assisted in developing. They are considered among the finest in the world. The last improvement which has been made through Gen. Terry's efforts in the Guard is the surgical field case, which the Surgeon General devised at the opening of the war with Spain, to take the place of the old army field cases, which he considered entirely out of date. This case is now known by the manufacturers, and has been named by the Adjutant General of the State, as the "Terry field case."

THE HOUR WHEN DEATH IS NEAREST.

PHYSICIANS and hospital attendants have noticed the greater frequency of deaths during the early morning hours, especially between the hours of three o'clock and sunrise. No satisfactory explanation has been given of this fact. A physician to whom Stephenson, in one of his books, puts the question why in early morning a strange influence is apt to disturb the sleep of men and animals, replies: "On or about three o'clock every morning all human beings and animals are nearer to death than at any other hour. At that time cattle stir and moan in their sleep, while men turn uneasily in their beds and awaken partially or wholly as though disturbed. If you are sitting up you will feel unusually cold and drowsy at that time. Three in the morning is an hour that we doctors are accustomed to dread, for by far the majority of deaths occur about that time.

"There are many explanations, one theory, and the most probable is that it is due to the ebb and flow of the earth's magnetic currents It has been observed that about three in the afternoon a man's physical forces reach their highest, and it is a simple inference that at the corresponding hour of the morning the lowest point of the vital tide is reached."

BOTTINI'S OPERATION.

DR. WILLY MEYER, in a paper read before the Academy of Medicine Nov. 3, gives the detail of twelve cases in his personal experience with Bottini's operation in the radical treatment of hypertrophy of the prostate, and says in conclusion, "After a careful, conscientious and unbiased observation of the twelve patients operated on by me, I venture to say that Bottini's operation bids fair to lead the van among the many operations so far devised for the radical cure of hypertrophy of the prostate."

INCREASE OF CANCER.

THE observations of a recent writer, Mr. W. Roger Williams, on the great increase of cancer, especially in England, brings to light important facts, but fails in fitting his theory to the real conditions. Contrary to accepted opinions, statistics show from 1840 to 1896 a remarkable disproportion of victims among men as compared to women. Among the former for the period named there is a ratio of 167 per cent. as compared with 91 per cent. of the latter. The author attributes this augmentation to the fact that of late years the lives of men, on account of town life, have greatly resembled those of the female population. Among the additional factors he also cites the want of exercise, the small proportion of fresh vegetables consumed, and especially the excess of animal food. A more careful generalization of facts would scarcely bear out the author's theory. It is very evident we must look for further and more conclusive facts

before the factors of this terrible disease, which has thus far baffled the skill of the physician and surgeon, are discovered. That they will be discovered at no distant day is altogether within the limits of probability.

TINNITUS AURIUM.

DR. ALBERT RODIN and Dr. Mendell, in the "New York Journal," highly recommend cimicifuga racemosa in the buzzing in the ear, which is frequently very annoying and difficult to determine the cause. The explanation of the action of this drug is in its effect upon the auricular circulation and upon the reflex irritability of the auditory nerve. The trouble itself is considered a reaction of this auditory nerve to direct or reflex irritation. The dose given is about thirty drops a day. The remedy is more efficient in recent cases, as in long standing cases there is liable to be organic changes of structure.

WE have seldom read a more fascinating story than that told by Prof. Samuel Arthur Jones and published by Boericke & Tafel, of "The Porcelain Painter's Son." The author says his story is "a fantasy," and yet it combines the web and woof of a great life, whose influences as a philosopher, teacher and seer upon the world no one can estimate. The little volume can be read almost at a sitting, but the reader will rise from its perusal with a kinder feeling and a greater reverence for the man, and a higher estimate of the deep, far reaching thought of one of the world's greatest benefactors. Never has the story of Hahnemann's life been told so simply, but with such exquisite beauty of thought and diction as in this little volume.

IN a recent issue of the TIMES we published an abstract of an article by Dr. Wm. T. Cathell, of Baltimore, on the use of Kissingen and Vichy waters in obesity. The article has created such wide interest in the profession that John Wyeth & Brother, the eminent manufacturing chemists of Philadelphia, have prepared the Vichy and Kissingen salts in crystallized form of uniform strength, which can be used with more positive effect than the waters.

In the preparation of these effervescing salts the government official analysis is accurately followed.

THE Homeopathic Medical Society of Germantown has exchanged greetings with the Philadelphia County Medical Society on the occasion of the semi-centennial of the latter. It would have been timely and graceful if at the same time the former had announced its abandonment of the sectarian designation.

BIBLIOGRAPHICAL.

Diseases of the Eye. A Hand-Book of Ophthalmic Practice for Students and Practitioners. By G. E. de Schweinitz, A.M., M.D., Professor of Ophthalmology in the Jefferson Medical College; Professor of Diseases of the Eye in the Philadelphia Polyclinic; Ophthalmic Surgeon to the Philadelphia Hospital; Ophthalmologist to the Orthopaedic Hospital and Infirmary for Nervous Diseases. With 255 illustrations and two chromo-lithographic plates. Third edition, thoroughly revised. Philadelphia: W. B. Saunders. 1899. Pp. 696. Octavo. Cloth, $4.

This book has reached a third edition in a wonderfully short time, and it shows that it has been appreciated as a text-book, for which it was intended. The present edition has been thoroughly revised and very much new matter has been added. The work has fully borne out what we have said of the previous editions. The physical part is excellent in every respect, in accordance with Mr. Saunders' best style.

A Systematic Treatise on Materia-Medica and Therapeutics, with Reference to the Most Direct Action of Drugs. By Finley Ellingwood, M.D., Professor of Materia Medica in Bennett Medical College, Chicago; late Professor of Chemistry in Bennett Medical College, Author of "A Synopsis of Medical Chemistry," "Manual of Urinalysis;" Editor of "Chicago Medical Times." With a condensed consideration of Pharmacy and Pharmacology. By Prof. John Uri Lloyd, Ph.D., late President American Pharmaceutical Association; Professor of Chemistry and Pharmacy in the Eclectic Medical Institute of Cincinnati; Author of "Etidorhpa." Chicago Medical Press Co. 1899. Pp. 706. Octavo.

This book is written from the so-called eclectic standpoint, and differs from others on this subject in what it terms "specific symptomatology" and its "therapy," which are in accordance with the teachings of this sect in medicine. It should be a useful book for those for whom it is intended, and the "physician" will find much practical and useful information in the experience of this class of practitioners. The text is conveniently arranged for reference.

A Manual of Physiology, with Practical Exercises. By G. N. Stewart, M.A., D.Sc., M.D. With numerous illustrations, including five colored plates. Third edition. $3.75 net. W. B. Saunders, Philadelphia.

The author in the preparation of this volume has followed the plan he adopted in his experiences in the Harvard Medical School and the Western Reserve University, of interweaving formal exposition with practical work. This edition has been revised and partially rewritten, and forms a very complete text-book for the student.

Saunders' Pocket Medical Formulary, with an appendix containing psycological tables, formula and doses for hypodermic medication; poisons and their antidotes; diameter of the female pelvis and fetal head; obstetrical table; diet list for various diseases; materials and drugs used in antiseptic surgery; treatment of asphyxia from drowning; tables of incompatibles, eruptive fevers, weights and measures, etc. By William Powell, M.D. Fifth edition, thoroughly revised. W. B. Saunders, Philadelphia.

The Living Age.—We call special attention to this, the oldest of all our magazines, the interesting pages of which have been a fascination to us for more than half a century. The promise for the coming year is exceedingly rich with the ablest thoughts of the European literary world, with whom the readers of the magazine will be brought in close touch.

The Century Illustrated Monthly Magazine commences the New Year with an increased beauty in its illustration and with more than usual able and interesting literary and scientific contributions to its pages. The January number contains the "Personal Narrative of the Maine," by Capt. Sigsbee. The February number will be exceedingly rich in illustrative and important articles, numbering among the rest the story of the Santiago campaign, by Gen. Shafter; Lieut Hobson and his crew in Morro Castle; "Harnessing the Nile" and "On the Way to the Pole."

The Practice of Obstetrics, by American Authors. Edited by Charles Jewett, M.D. Illustrated with 441 engravings, 37 of which are in colors and 22 colored plates. Lea Brothers & Co., Philadelphia, 1899.

This volume is the work of obstetric teachers and others equally expert in the lines on which they are written. It covers a broader field than is usual in books of this kind, as will be seen from the table of contents. Part I. is devoted to Anatomy; Part II., Physiology of Pregnancy; Part III., Physiology of Labor; Part IV., Physiology of the Puerperium; Part V., Pathology of Pregnancy; Part VI., Pathology of Labor; Part VII., Pathology of the Puerperium; Part VIII., Obstetric Surgery. In artistic and typographical appearance the volume has no superior.

Twentieth Century Practice. An International Encyclopedia of Modern Medical Science by Leading Authorities of Europe and America. Edited by Thomas L. Stedman, M.D. In twenty volumes. Vol. XVII. New York: William Wood & Co.

The present volume is devoted to infectious diseases and new malignant growths, and opens with a very able and exhaustive article on "Diphtheria (General Pathology and Bacteriology)," by William Hallock Park, M.D.; the symptomatology and treatment is given by Prof. A. Jacobi; Prof. Victor Babes, of Bucharest, gives a resume of the latest ideas upon the etiology and treatment of tetanus. The general pathology of cancer, and also of sarcoma, is given by Prof. Roger William, M.D., of Bristol, England, and the symptomatology and treatment by William B. Coley, M.D. John T. Bower, M.D., discusses the malignant growths of the skin and Edward McGuire, M.D., the malignant diseases of the female organs of generation. The present volume is marked by the same fullness of scientific information and the broad and practical grasp of the subjects treated which has characterized the entire work.

The Golden Age Cook Book. By Henrietta Lathan Dwight. New York: The Alliance Publishing Co., 1898.

The formulas for cooking in the Golden Age Cook Book does not admit of any preparations of meat, and while it is intended more especially for vegetarians, it will prove a valuable acquisition to every kitchen, in its tasty and scientific preparations of fruits, cereals and vegetables. The author gives Alcott's statistics on the economy of vegetarianism. "Thirty-two acres of land are needed to sustain one man on fresh meat. Under wheat that land will feed forty-two persons; under oats, eighty-six; under potatoes, maize or rice, one hundred and seventy-six, and under the banana, over six thousand. The crowded nations of the future must abandon flesh eating for a diet that will feed more than tenfold people by the same soil, expense and labor."

Annual and Analytical Cyclopedia of Practical Medicine. By Charles E. de M. Sarjous, M.D., and one hundred associate editors, assisted by corresponding editors, collaborators and correspondents. Illustrated with chromo-lithographs and maps. Vol. II. The F. A. Davis Publishing Co., 1899.

We gave the general plan of the work in our notice of the first volume. This volume extends from Bromide of Ethyl to Diphtheria, giving a scientific and practical exposition of each subject, with an abstract of the most valuable of recent literature. All the articles have been prepared by their respective editors, to whom subjects have been assigned by the general editor to men possessing special knowledge or unusual experience in particular lines of work. We notice among the exceptionally valuable articles, "Cerebral Hemorrhage," by Dr. William Browning, of Brooklyn; "Cirrhosis of the Liver," by Prof. Adami, of Montreal; "Cholera," by Prof. Rubino, of Naples; "Diabetes," by Prof. Lepins, of Naples; "Diphtheria," by Drs. Northrup and Boviard, of New York One of the most instructive chapters in the book is that on "Deaf Mutism," by Dr. Holyer Mygond, of Copenhagen, one of the greatest living authorities upon the pathogenesis of this condition. The article on remedies—including only those in general use—was prepared by Dr. G. Archie Stockwell, whose long experience renders his work especially valuable. The scientific correctness and artistic beauty of the colored plates and the engravings add very much to the value of the work.

The little volume on "Mechano-Therapy," a notice of which was given in a recent issue of the TIMES, is now published by W. B. Saunders. Physicians and nurses will find the instruction of Dr. Grafstron of great value in a large number of cases where mechano-therapy can be used with advantage.

Anatomy, Physiology and Hygiene. By E. Franklin Smith, M.D., lecturer on Anatomy Physiology and Hygiene, New York Preparatory School; Member of the New York Academy of Medicine, etc. New York: W. R. Jenkins, 851-853 Sixth avenue (Forty-eighth street).

The author of this work of over 200 pages has had a large experience as lecturer, as quiz-master and attache of colleges, and is well acquainted with the wants of students. This book contains information nowhere else collected in such a condensed and practical shape. It treats of anatomy, physiology, hygiene, in a most systematic and comprehensive way; it has included chapters on Emergencies, on Poisons and Antidotes, on Sanitation, on the Zymotic and Contagious Diseases, and has a glossary which contains the definition of every technical word used in the body of the work. It is illustrated by 64 cuts inserted wherever they could be used to advantage. This volume is the best of the class that has yet appeared and retails at the low price of one dollar.

New York Charities Directory: A classified and descriptive directory of the philanthropic, educational and religious resources of the city of New York, including the boroughs of Manhattan, Brooklyn, The Bronx, Queens and Richmond. Ninth Edition. Published by the Charity Organization Society of the City of New York, 105 East Twenty-second street. 1899. Price $1.

A convenient and instructive book for all charity workers, and it will be found handy to any person who is liable to require the information it contains.

Messrs. Lea Brothers & Co. announce for publication in March, 1899, the first volume of "Progressive Medicine," a new annual in four handsome octavo volumes, richly illustrarted, of 400 pages each, and appearing at intervals of three months, under the editorial supervision of Dr. Hobart Emory Hare. The price will be ten dollars for the four volumes. We copy from the announcement:

"What the busy physician needs to-day is a well-told tale of medical progress in all its lines of thought, told in each line by one well qualified to cull only that matter worthy of his attention and necessary to his success. He needs material which shall teach him all that the master of his specialty knows of the year's work.

"It is with the object of presenting only such readable and useful material that these volumes are published, and every contributor to the pages of "Progressive Medicine" will say what he has to say in an original narrative form, so that every statement will bear a personal imprint expressing not only the views of the author cited, but the opinion of the contributor as well."

Thirteenth Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania. Edited by Benj. Lee, M.D., Secretary, Philadelphia, Pa.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.

Muco-membranous Enteritis during Pregnancy.—M. Polizat (Marseilles) cited the above disease appearing at seven months of pregnancy, disappearing after delivery, and reappearing in a milder form during a second pregnancy. There are no hereditary nor pathological antecedents, no neuropathy, habitual constipation nor marked dyspeptic troubles. Nor does this form of muco-membranous enteritis differ from that observed in ordinary practice. It is certain that the overproduction of intestinal fermentation is the most important etiological factor in this pathological condition. It may be the consequence of the habitual constipation of pregnant women, which often occurs, but may be unperceived because of the few manifestations attending it. The microbic element, as yet imperfectly known and contained in the muco-membranes, can alone explain the infection from the disease, and the auto-intoxication of pregnancy is the important factor in its development. M. Uinay.—Muco-membranous enteritis is a rare complication of pregnancy. It is due rather to an auto-intoxication or an intestinal paresis consecutive upon impregnation. For the rest auto-intoxication and a particular nervous condition are the chief factors of the whole pathology of pregnancy.

FRENCH CONGRESS OF SURGERY.

Tubercular Urethritis Followed by General Tuberculosis after Surgical Intervention—M. Lavaux (Paris).—A patient, aged 58 years, had a tubercular epididymitis 20 years before. In 1893 there were signs of chronic tubercular urethritis, anterior and posterior. Much improved by an appropriate treatment, but on being imprudently treated by a physician who employed injections of the nitrate of silver, there was a rapid degeneration of the lesions of the urethra, prostate and perineum. A surgeon opened and curetted the perineal abscess, which was followed by metastasis of the tuberculosis to the right mammary region. In a second case, complicated with blennorrhagic urethritis, the diagnosis was doubtful, but injections of the nitrate of silver equally caused grave lesions of the prostate. From these facts the following conclusions are deduced: First, Generalization of tuberculosis following an operation practiced upon the urinary passages, when infected by the bacillus of Koch, is always possible. Second, When there is no urgent need for intervention, every form of traumatism of the urinary passages, even simple catheterism, of those affected by tuberculosis should be avoided. Third, Injections of the nitrate of silver are expressly counterindicated in urinary tuberculosis. Fourth, The progress realized in the treatment of cystitis and urethritis of chronic blennorrhagic origin justifies the affirmation that the method of injections, which is painful and presents real dangers, should be abolished from the treatment of inflammatory affections of the urinary passages.

Appendicitis or Annexitis—M. Bouilly.—The differential diagnosis between appendicitis and annexitis is often difficult, hence the uncertainty in the treatment. There are three orders of facts, and appendicitis may be mistaken for an annexitis, and vice versa, or an appendicitis may coexist with an annexitis. The most dangerous is to mistake an appendicitis for a peritoneal attack of annexitis. In the latter operation is rarely indicated; in the former it is most frequently urgently needed. The following peculiarities may lead into error. A diffused abdominal sensibility instead of being localized at the appendix, concomitant genital symptoms, sensibility in the cul-de-sac, and the absence of appendicular antecedents. In appendicitis, however, the symptoms are generally more pronounced than in annexitis. They are more grave, sensibility greater, face more altered, temperature higher, and we should not be deceived by the abatement of the symptoms observed in the progress of appendicitis. An error of diagnosis may be fatal; prompt intervention in appendicitis is necessary; in fine, when there is doubt, operate. M. Roux.—It is not always necessary to operate too soon in appendicitis. In the beginning, it—the appendicitis—may be accompanied by a very intense peritoneal reaction, causing fear of an immediate fatal result, but the peritonitis may afterwards subside or become localized. If we operate too soon, when the pulse is extremely rapid and the peritoneal reaction extreme, there is a risk of killing the patient by the operation. M. Quena.—I do not believe it is necessary to wait too long; perform laparotomy, remove the pus and put in your gauze. M. Walther reported seven cases of chronic appendicitis that had presented peculiar phenomena, sometimes appearing without anterior acute attacks, advancing slowly and forming epiploic adhesions, which in their turn produced gastric troubles, sometimes accompanied by acute pains in the stomach and epiploon, again a subacute appendicitis with recent epiploic adhesions, and another form acute from the beginning, and afterwards attacks of appendicitis and of epiploitis. Finally there is a slight form of appendicitis that determines adhesions of the colon and epiploon.

FRENCH ASSOCIATION OF UROLOGY.

Acute Prostatitis from Gonococci.—M. Cottet reported the following interesting observation: A man of 35 years was admitted into the Hospital Necker for accidents following gonorrhoea contracted two months previously. The patient had an intense cystitis, accompanied with vesical and rectal tenesmus, prostate large, but presented no fluctuating points. Eight days later fever set in, and on examining prostate an abscess was found. The prerectal operation was performed, and in the pus there were found gonococci in abundance, cultures of which gave beautiful results. M. Cottet believes that this remarkable observation of acute prostatitis determined by the gonococcus is an isolated fact, as in spite of diligent research he has found it impossible to discover in medical literature another example of this curious localization.

Four Observations of Calculi Treated by the Hypogastric Operation—M. Bosquet de Clermont Ferrand.—Two of the cases were old men of 73 years who were cured without complication, but for many weeks retained an opening in the hypogastric region. On the contrary, in a child of eight years the bladder was from the first completely sutured and union by the first intention obtained. Next case a young girl of 13 years who had introduced a hairpin into the bladder, a calculus developing around it. The points of the pin perforated the anterior wall of the bladder. The urine, mixed with pus, had dissected the cavity of Retzius, into which it had infiltrated, giving the appearance of two bladders. The walls were shriveled, thickened, and its different layers were infiltrated with the microbes of suppuration. To try suturing would have been rash, as a few points made by the catgut above the syphon-tubes caused sphacelus. Investigation of the above cases induced the following conclusions: First, Following the hypograstric operation the vesical suture appears to be indicated whenever the walls of the bladder are healthy and there is no obstacle to prevent the emission of urine. Second, If the vesical walls are altered, or interfere with urination, the supra-pubic wound should be left open, partly at least. M. Imbert, of Montpellier, related a case of a child of four years upon whom he had performed the supra-pubic operation.

Results of Vasectomy in the Treatment of Hypertrophy of the Prostate—M. Nicolich (Trieste).—In order to judge of the effects of vasectomy upon prostatics, I have grouped them under three heads: First, First attack of complete retention following a period, more or less long, of dysuria. Second, In complete chronic retention which, at variable intervals, becomes complete. Third, Complete chronic retention. Two of the first group were operated upon in February and November, 1898; both did well; no further use of sound; prostate diminished. Of the second group there were 31, with 9 complete cures, 10 improved, 12 unsuccessful. I believe it may be affirmed that vasectomy is an operation which can ameliorate the condition of prostatics very much, and in certain cases, as yet undetermined, it has diminished the volume of the hypertrophied prostate and arrested nearly all the morbid phenomena.

ACADEMY OF MEDICINE.

Treatment of Acromegalia by Hypophysine.—M. Lancereaux read a report by M. de Cyon. The hypophysis produces a substance designated by M. de Cyon under the name of hypophysine, which is a powerful adjuvant of iodothyrine. These two substances possess the property of diminishing and increasing the pulsations of the heart. Acting upon this property, M. de Cyon has used hypophysine in a case of acromegalia occurring in a child of 12 years, daily dose 0.02 centigrams. Three weeks later the head symptoms had disappeared, pulsations of the heart were regular and less frequent, the intelligence

was reawakened. He concludes from this that the cerebral troubles, cephalalgia, and cardiac functional irregularity were the irrefutable result of the action of the hypophysis.

Toxicity of Appendicitis—M. Labbe.—In view of the results yielded by surgery to-day in the above disease, I have become an interventionist. But I separate myself from M. Dieulafoy when he affirms that no one need die of appendicitis. There are always cases beyond the resources of science, and if the affirmation of M. Dieulafoy were accepted it would have the effect of making physicians and surgeons responsible for the fatal issue of a disease when they should have done everything to save the patient.

SURGICAL SOCIETY.

Surgical Treatment of Exophthalmic Goitre.—M. Schwartz reported operations upon two cases of exophthalmic goitre. One of the patients was a young girl of 23 years, in whom the disease began six years previously. Tachycardia supervened at the same time that the goitre increased in volume, and later on the general physical distress had become so great as to render life almost intolerable. A resection of the right sympathetic and two-thirds of the superior cervical ganglion was made, and at the same time that of the left sympathetic, involving also a section of the spinal, was equally made. The following operative results were observed. On the evening of the day of operation the eyelids could be made to close and to cover the ocular globes; which had been impossible previously. As respects the tachycardia, a very speedy amendment was produced, and the cardiac pulsations fell from 150 to 112. The volume of the tumor was diminished and all the general symptoms disappeared, so much so that the patient's condition was excellent, notwithstanding the persistence of a certain degree of exophthalmia and tachycardia. The second patient had a small goitre, but accompanied with marked exophthalmia and cardiac disturbances. Each night she had attacks of intense angina pectoris. In this case the operation presented serious difficulties. The great sympathetics were deep in the midst of infiltrated and erectile tissue, which explained a very intense thrill that characterized the goitrous tumor. In the first operation, lasting one hour, the superior cervical ganglion and five centimeters of the great sympathetic of the right side were resected, the left not touched because of the weakened condition of the patient. In a few days a diminution of the volume of the right half of the tumor and of the exophthalmia of the same side was observed, but there was no cardiac change. A month later the same operation was performed on the left side, and there immediately followed a cessation of the cardiac symptoms, and soon a disappearance of the general troubles. Slight tachycardia remains, but the general amelioration is very considerable.

A New Method of Removal of Foreign Bodies from the Nasal Fossae—M. Feliret.—It is well known how difficult it very often is to rid the nasal fossae of children of the foreign bodies that find lodgment in them. A very simple method of relief, and one which has succeeded 26 times in 31 cases, is to inject the nostril of the opposite side. Care should be taken to inject slowly, and with progressive force.

MEDICAL SOCIETY OF THE HOSPITALS.

Acute Gastro-Enteritis of Nursing Children.—M. Lesage.—During an epidemic, a certain number of children were nourished with sterilized milk. Whether there was a toxine in the sterilized milk, or from the effects of heat and storm, there was a modification in the intestinal conditions, causing change in microbic properties and the production of toxic qualities. As no poison was found in the milk the second hypothesis seems to be the most rational. After minute investigation of numerous cases, I am induced to think that heat has an evident action upon certain intestines, and that each summer, in spite of sterilized milk—which protects against enteritis for six months of the year—attacks of this disease will be seen. Does the action of heat upon the properties of microbes produce toxine in the intestines? Whoever studies toxines knows very well that it takes but little to diminish or increase their toxic power. From a clinical point of view there is an absolute identity between the two varieties of acute gastro-enteritis (infants nourished with aseptic or septic milk). In the two varieties the same microbic condition is observed. Do the microbic agents, then, come from without, or are they the normal inhabitants of the intestine. In either case they become hurtful, for this or that reason, and the result is the same, viz., the production of an intestinal poisoning. An aqueous diet is the best method of treatment of acute gastro-enteritis. It cannot be continued more than 48 hours; then what is to be done? Czerny recommends the breast, and it is evidently the best solution of the difficulty, but in practice this is not possible in the actual conditions of life. Sterilized milk (115 degrees—110 degrees) is entirely indicated, and its administration should not be based upon the age of the child, and given every 2 or 4 hours, as is the custom, but the quantity should be given according to the weight and not the age. Thus a child of 3 months that weighs 3 kilogr. should not absorb as much milk as one that weighs 5. What happens if on the third day the normal quantity of sterilized milk, according to weight, is given promptly to the child? If the poisoning is slight and of recent date, it will be followed by good results (10 cases in 35). But if on the contrary the toxic condition is not terminated, and the intestine is badly affected, the disease will continue its course. When the weight is increased by the water diet, and improvement continues, a sudden giving of the milk will be followed by a recurrence of accidents. The following method, constantly pursued by me, gives the best results. Pure sterilized milk on the third day, morning and evening; at other periods water; on fourth day, give the milk three times, the rest water, then gradually increase quantity of milk. In every case no farina nor condensed milk. Czerny rejects equally the use of milk of Gartner, Bacchaus and peptonized milk. If the water diet produces no result, M. Marfau recommends its suspension for four or five days, then its renewal and careful use. In this way a slow cure of a tenacious gastro-enteritis may be obtained. It is sometimes astonishing to see children that have reached the last stage of digestive cachexia, gradually become completely re-established. Then never despair in the struggle against digestive poisoning. The study of the hydric regimen is a brief foundation upon which the effects of intestinal antitoxic serotherapy may be based.

Chronic Osteopathy of the Lower Limbs of an Unusual Type—M. Edgard Hirtz.—The patient shown to the society does not present the characters of Paget's disease. The osseous deformities and hypertropies are limited to the lower limbs. Head not increased in size, upper limbs, thorax and pelvis are normal, spine straight, no signs of acromegalia, nor of syphilis, hereditary or acquired; moreover, specific treatment has had no result. The coincidence of a perforating disease of the right foot recalled tabes, but there is no sign of it. The trophic trouble, however, suggests that the perforating disease and the osseous lesions may be ascribed to a lesion of the peripheric nerves or the medulla according to the opinion of MM. Gilles de la Tourette and Marinesco.

OBSTETRICAL AND GYNECOLOGICAL SOCIETY.

Occlusion of the Vulva and Vagina—Autoplasty—M. Porak.—The patient was delivered at the Maternity, had been in labor a long time when entered, and presented infection. Extraction of living child by difficult forceps delivery, discharge of fetid debris by vulva, and cure by frequent sponging. Fifteen days after patient returned with complete occlusion of vagina, which required forcible pressure of the finger to break down, the yet friable adhesions uniting the vaginal walls, cervix and uterus disappeared. To avoid cicatrization a dermo-epidermic graft was taken from the thigh and transplanted to vagina; it was successful, and the vagina cicatrized without contraction.

Treatment of Breast Cracks with Orthoform—MM. Maygrier and Blondel.—Because of the analgesic and slightly antisepic properties of orthoform, we have employed this remedy in the treatment of cracks or sinuses of the breast, and used it in form of powder or alcoholic solution. Analgesia followed in five or six minutes and lasted many hours. The remedy permits the continuance of nursing, which is painless, and in a few days cicatrization is complete.

FRENCH SOCIETY OF ELECTRO-THERAPY.

Electric Treatment of Hysterical Gastralgia—(Contribution of Franklinization to Electro-diagnosis)—MM. Apostoli and Planet.—Apropos of an observation of a grave case of hysterical gastralgia, of ten years' duration, rebellious to approved treatment and suspected to be of tabetic origin, it was caused to disappear by franklinization

alone, and the following are the general conclusions. First: Certain gastralgiae, manifestly hysterical, may simulate an early and often isolated symptom of the beginning of tabes. Second: The differential diagnosis between these two forms of gastralgia will find in franklinization, well applied and well investigated, a valuable element of conviction. Third: Electric treatment—static—discloses very soon, and from the beginning of its application, hysterical conditions, by bringing to light peripheral perversions of sensibility, and often confirms the immediate diagnosis by their greater or less mutability. Fourth: The same electric treatment, when applied sufficiently long, will combat successfully hysterical gastralgia, the diagnosis of which will be made doubly clear by therapeutic treatment.

J. A. C.

THE LOUISVILLE CLINICAL SOCIETY.*

Fracture in Aged Persons.—George W. Griffiths, M.D., asked the experience of the members of the society in regard to fractures in old persons. The subject is suggested by the following case that has been under my observation for several weeks:

An old lady, 90 years of age, 11 weeks ago sustained a compound fracture of the leg at the junction of the middle with the lower third, having been run over by a car. She was also bruised about the head and face, followed by considerable ecchymosis, which was very slow in being resorbed.

In searching ancient and modern surgical literature I have been able to find nothing concerning fractures in persons of this age. This patient has been under my care for 11 weeks; there has been apparently no attempt at union of the fracture, nor did I expect any, but there seemed to be a thickening of the deep tissues, which gave considerable support to the leg; there was no bony union, however. The circulation was rather feeble, and the fracture being one of the extremities the fixed dressing had to be so placed as not to interrupt the circulation. The external wound healed nicely, although healing was rather slow in its progress. The old lady died this morning of bed pneumonia. What I wanted to inquire, especially, is, whether any member knows of any surgical literature dealing with cases of this kind. I treated the case with patent nickel splints properly supported so as to keep the bones in correct apposition. I have looked over a great many surgical works, ancient and modern, and have been able to find nothing in regard to the treatment of such cases. I have watched the case with a great deal of interest, because fractures in people of 90 years are rather infrequent.

This lady did not have the senile arc; she was cheerful and bright, and I was a little hopeful that there would be some union, but there was apparently none. The bones were held in apposition and there was evidently some thickening by deposits about the deep structures.

A post mortem would be of considerable interest in this case, but it will be impossible to secure one. I do not believe it is possible to get bony or even ligamentous union of fractures in persons as old as this. My only idea in reporting the case was to suggest some study and research in regard to such cases. I did not consider it advisable to irritate the ends of the bones to stimulate union; the only thing I did was to keep the leg perfectly quiet with the bones in correct apposition, being careful not to interfere with the circulation. It would be practically impossible to fit up an apparatus to be worn by a person of this age; she would certainly have gotten her foot on the floor and thus have brought the opposing parts together.

I would also like to mention that I trephined a little child four years of age a few days ago, the child having been injured on the street, and the doctors who were present at the time had no idea as to the thickness of the skull of a child of this age as compared with that of an adult.

I tried also to hunt this subject up in anatomical and surgical works, but could find nothing concerning it. No observations seem to have been made and recorded, and I would also suggest this as field for study and research. If we had some reliable data it would be of material assistance in trephining young subjects as compared with adults.

Sarcoma of the Nose.—Thomas C. Evans, M.D., said: This specimen is from a woman, aged 54 years, who died at the St. Mary and Elizabeth Hospital four weeks ago. The patient first came under my observation two and a half years ago; she came to my office complaining of epistaxis from the right side of the nose. She also complained of facial neuralgia of the right side, and pain about the right eye. Examination at that time showed very little disturbance of the nose; there was slight enlargement of the posterior portion of the inferior turbinated bone; the enlargement was not marked, but on touching with the probe it was abnormally sensitive and also showed a tendency to bleed easily on the slightest manipulation.

Malignant disease was diagnosticated at that time. I also referred the patient to Dr. J. M. Ray, who confirmed my diagnosis that the woman was suffering with malignant disease of the nose, and also stated, as I had done, that it was an inoperable case. I kept her under observation from that time until she died. At my first examination, and I made a very thorough examination by transillumination, using the Herying lamp, the antrum was found perfectly translucent.

The patient suffered so much during the last 18 months of her life that she could only endure the pain by taking enormous doses of morphine.

On post mortem examination we found that the growth had caused complete absorption of the basilar process of the occipital bone as well as the body of the sphenoid bone; it had also grown through into the middle fossa of the skull, the tumor in this region being about the size of a partridge egg; it had also grown into the orbit, causing exophthalmos, which destroyed the eye from exposure.

Six months before the patient's death the growth protruded into the oral cavity through the alveolar process on the right side. The tumor of the buccal cavity attained the side of a goose egg, rendering necessary the extraction of the teeth in the inferior maxilla. Two weeks before her death the buccal portion of the growth sloughed away; this was followed by profuse hemorrhages, and the patient really died from loss of blood.

The whole structure of the cranium and superior maxilla was so softened that I had no trouble in cutting it with a scalpel; in making a vertical section through the base of the skull it was unnecessary to use a saw except in cutting through the frontal bone. This specimen shows that the neoplasm had invaded the antrum on the right side, the sphenoid and the ethmoid cells on both sides; it also grew into the orbit and into the middle fossa of the skull. Pathologists all report it as alveolar saracoma. Dr. Henry Koehler was inclined at first to believe that it was an epithelioma, but upon second examination he decided it was a sarcoma of the alveolar form.

Sarcoma of the nasal passages is rather uncommon. I think Bosworth at the time of his first publication on "Diseases of the Nose and Throat," five or six years ago, had been able to collect only 41 cases, and in some of these the diagnosis is doubtful. Only three cases of sarcoma of the nose had actually come under his own observation. Sarcomata of the nose are very slow in their development; the rule is that they last about three and a half years. The average time from the date the growth is first noticed until death takes place is three and a half years; sarcomata here are not of as rapid growth as in other parts of the body.

Very few cases of sarcoma of the nose have been successfully operated upon. Most of them are like this one from the start, inoperable cases. The growth in this case, in my opinion, sprang from the periosteum of the posterior part of the inferior turbinated bone; that was the first evidence we saw of it, at least. Notwithstanding the extensive involvement of the bones of the base of the cranium, there was no paralysis of any of the cranial nerves nor were there any cerebral symptoms produced by the encroachment of the tumor on the middle fossa.

DISCUSSION.

Dr. S. G. Dabney: I have seen but one case of malignant tumor of the nose and that case soon passed from my view. The tumor had every clinical appearance of being a sarcoma, and involved the anterior portion of the nose. My impression is that this tumor (in Dr. Evan's case) began from a very unusual point; I think it is uncommon for them to begin, as stated by Dr. Evans his did, in the posterior turbinate. They more frequently begin in the antrum; this location would seem to be excluded in this case from the fact that transillumination test showed the antrum of the affected side to be perfectly

* Stenographically reported for this journal by C. C. Mapes, Louisville, Ky.

clear. Of course a solid tumor of this kind of any considrable size would make the antrum dark. In fact, Hering's test was first of all used to distinguish cystic from solid growths of the antrum.

I desire to mention one point which is rather *apropos* to the subject, *i. e.*, that tumors of the anterior portion of the nose sometimes present the appearance of malignancy and turn out not to be such. I saw two cases of this kind not long ago. One was in a married woman who had no symptoms whatever of specific trouble so far as I could elicit from questioning both the lady and her husband. She had a firm, solid growth involving the inferior turbinate bone, also some enlarged glands about the neck, all of which disappeared very quickly under the administration of iodide of potassium. The other case was in a man who also positively denied any history of syphilis, and he had no suggestive symptoms except a small, hard growth of the inferior turbinate bone. Under the use of antisyphilitic treatment he made a prompt recovery. I simply mention these cases to show that gummata involving the turbinate bones may present symptoms of malignant disease. In both these cases there was glandular involvement, considerable pain, no hemorrhage, but a firm, hard growth, rather more rapid in development than a sarcoma, and both cases presented a negative history of specific disease, yet both recovered under the use of anti-syphilitic treatment

Dr. William Cheatham: I desire to simply refer to the electric light test in antrum troubles. I have never had it fail so far as I know, until a week ago. A gentleman came to me who had been under the care of one of our specialists, who had had the middle turbinate bone removed, and probably other structures of the nose also. I made a careful electric light test, which was negative; the antrum of the affected side was even lighter than the other. The specialist under whose care the patient had formerly been had also made a similar test, with like results. On examining the case more closely I could see a little pus coming from the antrum, and in passing a probe it returned bearing pus. A dentist bored through a tooth into the antrum, which was found filled with pus. In some cystic growths of the antrum there will be no difference in the two sides under the electric light test, or if any difference the diseased side will be the lighter of the two, but here was an antrum filled with pus which was not developed by means of a careful test by transillumination.

GALL STONES. *

By A. M. Cartledge, M.D., Louisville, Ky.

When we think of the frequency of cholelithiasis and the great amount of pathology witnessed from this cause by both the general practitioner and the surgeon, one must be impressed with the vast importance of the subject of gall stones.

I may be prejudiced in that I view the subject more from the standpoint of the surgeon than the general practitioner, but certainly to surgery is due most of our knowledge of the natural history and pathology of gall stones. More information has been gained in this respect from operations than from all the autopsies that have been made throughout time, so far as we know. It has been my fortune to observe a great variety of changes which have taken place during the course of gall stones, their various manifestations, etc.

As to the Differential Diagnosis between Malarial Troubles and Gall Stones.—I am sure this mistake is frequently made where pain is absent in gall stones, where the gall bladder has perhaps undergone secondary infection, where there is not even colic. I have operated upon such cases. I recall three that had been treated in several periodic attacks for supposed intermittent fever. There has been no fever since removal of the gall stones. In one case there had never been the slightest pain referable to the gall bladder region until the attack immediately preceding the operation. Several large gall stones were removed, and the patient is now perfectly well.

The Point in Regard to Fever is Important.—I was recently called to see a lady suffering from impaction of gall stones in the cystic duct. An operation was performed within two hours after she had a temperature of 107½ degrees Fahr. The lesion was slight, but the inflammation was of such character as to cause intense toxemia; there was no abscess, and the infection was supposed to be from the colon bacillus.

Our knowledge of the causation of gall stones is at present in a chaotic state. The indications point to mechanical obstruction playing a large part in their production. I have seen numbers of cases, verified by operation, in which distention of the gall bladder was associated with a descended liver, usually in those accustomed to tight lacing. It can be easily understood that, in the female who wears tight corsets, the pressure thus exerted may have something to do with the production of gall stones.

Cancer and Gall Stones.—I do not agree with some authorities that gall stones produce cancer, but think the reverse is true. In a large percentage of cases of carcinoma of the liver in which gall stones are associated, obstruction as a result of the cancer is probably the chief cause. We can understand how constriction about the lower border of the liver presses upon the cystic duct, interferes with emptying itself of bile, leads mechanically to stagnation of the bile, and favors the deposition of billiary salts and the formation of calculi. It seems we are justified in reasoning that there must be some primary disease of the mucous membrane of the gall bladder. We must consider primarily, from a surgical standpoint, that all gall stones are formed in the gall bladder; there is nothing to prove that they form in the common duct, although often found there. Very small concretions found in the hepatic duct probably form there primarily, but a gall stone found in the common duct has originally inhabited the gall bladder. The clinical history will prove this. I think we are justified in reasoning, as before stated, that there must be some diseased condition of the mucous membrane of the gall bladder antedating the formation of stones. Such a condition may be produced by mechanical interference—pressure of the corset, abdominal tumors, etc.

I cannot agree with modern teaching that gall stones can always be traced to a catarrhal condition of the duodenum leading up through the common duct into the gall bladder; infection of the mucous membrane by the colon bacillus, which extends to the gall bladder in this way, followed by the formation of gall stones. It is easily understood, however, that from irritation we might have obstruction to the flow of bile and the formation of calculi might thus be brought about. The genito-urinary specialist will tell us that vesical calculi are preceded by changes in the mucous membrane of the urinary bladder —from ammoniacal urine or some other cause—which must take place before deposition of salts can occur.

The diagnosis of gall stones is as a rule easy. The right kidney has been found the most troublesome factor in my experience; but the symptoms of gall stones are such that if due care be exercised few mistakes in diagnosis should occur. I do not operate in any form of abdominal disease in which I feel as sure of my diagnosis as in gall stones.

Adhesions about the Gall Bladder, Bile Ducts, etc.—This may be the cause of obstruction, but my experience leads to the belief that in many instances the trouble is caused by gall stones, though they be not found at the time of the operation. I recently operated upon a patient who was in profound cholemia, removing three gall stones, but to this day I am unable to say from just what location they were removed. Everything was bound down in a mass of adhesions, and while the gall stones were found and removed, I was never able to isolate the gall bladder. Although the patient was in an extreme condition at the time of the operation, she made a good recovery.

Where there are extensive adhesions in this region with obstruction as a result, I am inclined to believe there are gall stones, even though they may not be found at the operation. I have operated upon several such cases. In some instances the operation may not be safely prolonged sufficiently to search for the calculi, and by separating the adhesions the patient may get well.

In Regard to Dissolving Gall Stones.—There is a popular belief that certain remedies administered *per orem* have the power of dissolving gall stones, of preventing their formation, etc. Physicians should be careful about making statements of this kind when they are not known to be true. How can it be said, with the least shadow of truth, that Carlsbad water will cure gall stones? That Carlsbad

*Discussion before the Louisville Clinical Society. Stenographically reported for this journal by C. C. Mapes.

water is of benefit in the treatment of many diseased conditions I am willing to admit, but where there is already the formation of gall stones, it is a mechanical impossibility to dissolve them, within the body, by any known remedy. How can olive oil (which has been recommended for the purpose) work its way up through the ducts and have any effect upon the calculi. I have repeatedly tried, under high pressure, to force water through the cystic duct into the common duct, and have been absolutely unable to do so. The reservoir was placed as high as seemed justifiable, and all the pressure was brought to bear that was warranted, yet it was impossible to force the water through. I can readily understand if profound jaundice existed, if a stone were imprisoned just at the junction of the common duct and duodendum, and it were possible to surround the stone with a quart of olive oil, it might mechanically dilate the duct and in that way aid in working the stone out through the duct

As to the Size of Gall Stones.—I have one as large as a hen's egg in my collection. It is three and a half inches long by two inches in its transverse diameter. Such stones could hardly be expected to be dissolved by any process.

Where there is rupture of the gall bladder, whether or not septic peritonitis develops, depends upon the composition of the bile. If the gall bladder contents have become infected, the patient will die; just as happens in appendicitis where rupture takes place, the fluid having become infected with virulent organisms. If the gall bladder has become infected, and you have septic bile poured out into the cavity, the patient will promptly succumb. It has been clearly demonstrated that healthy bile does not produce peritonitis. I saw, with Dr. W. C. Dugan, a man seventy-two years of age where the gall bladder had ruptured and a thousand small stones were poured out into the cavity, yet the man made a good recovery.

As to the Operation of Election.—I think cholecystotomy is the method which should be pursued. In the next two years I believe we will scarcely hear of cholecystenterostomy being performed as a routine measure. There is hardly an argument in favor of doing cholecystenterostomy. Where a stone is impacted in the common duct, and the patient's condition will not permit a prolonged operation, I claim it is better to drain the bile away instead of trying to get it back into the intestinal tract, as it has been demonstrated that a person can get along very well without bile. When the patient has become stronger, the stone may be removed by a secondary operation.

I do not believe the gall bladder is obliterated by being drained through the abdominal wall, as claimed by some writers. In the older operations, where a large incision was made into the gall bladder it may in some cases have been obliterated; but where the operation is properly performed only a small incision is made, and under such circumstances I believe the gall bladder is not obliterated as claimed. The incision should be made only of sufficient size to extract the stones. I usually suture the gall bladder to the size of a drainage tube, and the fistula heals much more readily than where a larger opening is left.

HOSPITAL REPORTS.

MEDICAL CLINIC, HELD AT THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL, DECEMBER 20, 1898.

By Dr. Stephen Smith Burt,

Professor of Physical Diagnosis and Medicine, New York Post-Graduate Medical School and Hospital; Late Attending Physician, Diseases of Heart and Lungs, Out-door Department, Bellevue Hospital.

Gentlemen: This woman, whom we saw at last Saturday's clinic with marked flatness in front and bronchial breathing, we accounted for the flatness by plastic exudation. Since then I found it was due to fluid, and not to plastic exudation. On Nov. 30th 53 or 60 ounces of fluid had been drawn from her chest. I examined her again, and found that it was tympanic in front on the left side when she was upon her back, and, upon sitting up, it was flat again. There was a change in the level of the fluid. This case was interesting, because the change in the level of the fluid was easily produced. In pleurisy we do not usually find the level change so easily. That side was tympanitic and the normal side was dull by comparison. That condition does not often happen.

In last few clinics I have spoken of the different parts of this chart. This chart reads as follows:

METHOD OF PHYSICAL EXPLORATION.

Inspection.—Form, Size, Movements of Chest, Facial Expression, Sputa, Decubitis.

Palpation.—Form, Size, Movements of Chest, Fremitus.

Calormetation.—Expansibility, Circumference, one-half Circumference of Chest.

Percussion.—Quality, Pitch, Intensity, Duration.

Resonance.—Pulmonary or Vesicular, Dullness, Flatness, Tympanitic, Vesiculo-Tympanitic, Amphoric, Cracked-pot.

Auscultation.—Quality, Pitch, Intensity, Duration, Rhythm.

Breathing.—Pulmonary, Bronchial, Broncho-Vesicular, Amphoric, Exaggerated, Diminished, Absent.

Adventitious Sounds.—Harsh, Sibilant, Sonorous Breathing, Crepitant, Subcrepitant, Bubbling, Cavernous, Amphoric Tinkling, Clicks, Friction.

Voice Sounds —Vocal Resonance, Amphoric Voice, Ægophany, Pectoriloquy, Bronchophancy.

To-day I will say a few words on calormetation. You are all familiar with the use of the thermometer. It is of great service in physical diagnosis. It is of great assistance in determining between acute and chronic troubles, and in the diagnosing of various troubles we come in contact with. It is an interesting fact that the body maintains the same temperature in health. It is of the greatest importance in dagnosis. For instance, take the diagnosis between typhoid fever and intermittent fever. The course of the fever in a typical case of typhoid fever shows some elevation at night, in connection with other symptoms. The temperature is a little higher each night, and it works up gradually, and by the end of a week it may be 104 degrees at night and 103 degrees in the morning. There are variations during the day. In four weeks it begins to do down, first in the morning. It ends by being normal in the morning before it is normal at night. This occurs in a typical case of typhoid fever. In intermittent fever the patient is first taken with a chill, fever follows, and often the temperature goes to 104 degrees or 105 degrees, where it remains a certain number of hours, when it becomes normal again. This is not so in typhoid fever. Thus, the thermometer is an important instrument in differential diagnosis. In remittent fever there is considerable difference. Intermittent fever and typhoid fever are decided upon by the course the temperature takes. There are many cases of bronchitis where there is no fever—not the slightest elevation of temperature. There is none in chronic heart troubles. Absence of fever is in favor of chronic rather than acute troubles. Where there is no fever, but evidences of any kind of a murmur, the chances are that there is no acute condition. In case of phthisis, during the progress of the disease, the elevation of temperature may be 101 degrees or 102 degrees, possibly higher, 103 degrees or 104 degrees; fever at night is in favor of its being phthisis.

In the taking of the temperature the management of the thermometer is important. If a person is not careful there may be many errors made. This instrument should be held in position for five minutes; if held for ten minutes the instrument registers a little higher. If the instrument is placed in the patient's mouth, it is important that they should close their lips and keep them closed; if they breathe through the mouth the instrument is cooled and does not register the proper degree of temperature. If it be placed under the arm one should be careful that it does not slip through or come in contact with the clothes. With the fixing of the index you are all familiar. I usually shake the instrument over the bed, so if I should let it slip through my fingers it will fall upon the bed and so not be broken.

A sudden elevation of temperature, in the course of disease, warns you of some sudden change; in typhoid fever this may mean an inflammation of the lungs or some other acute complication; it warns you that the patient should be examined and some complication sought for. A sudden

fall may mean some complication, as hemorrhage or collapse. In some cases of pneumonia, with a temperature of 103 degrees or 104 degrees, possibly 105 degrees, where it remains up one week or ten days, or sometimes two weeks, with slight variations, there may be a sudden fall, and the next morning it is normal, the fall being by crisis; or it may come down by lysis. In case of pneumonia, where the temperature has fallen and it begins again to go up at night, it should warn you of the possibility of a tubercular complication. And just so in many more diseases we are helped by the use of the thermometer.

In different people the thermometer acts differently. In health there is a certain wave of temperature; it is always higher at night than in the morning, about 98.6 degrees, or even 99 degrees, and this ought not to be considered out of the normal; a person with a temperature of 99 degrees probably has nothing at all the matter with him; above 100 degrees it is fever. Old people do not give the same mobility of fever as do children. An old man may die of pneumonia and scarcely have any fever at all; this should always be borne in mind. In some of the chronic diseases, as chronic Bright's disease, there may be a fatal attack without great elevation of temperature. I remember an old man who had a chronic dilatation of the pelves of the kidney, enlarged prostate, etc., but besides this the physical examination showed well marked crepitant rales, on both sides of the chest, and friction, but there was no dullness on percussion on account of the rigid chest wall; there was no fever. Here was a man in the most acute stage of a pneumonia with pleurisy, with no fever. The autopsy showed red hepatization, and an extensive exudation on both sides. I was once called to the wards to see a patient who had some chronic kidney trouble, with a temperature of 101 degrees, with extensive consolidation of the lung, bronchial breathing, etc., which finally ended in death. There was no fever indicative of such a condition.

On the other hand, in children an attack of constipation or indigestion may produce a fever of 103 degrees or 104 degrees. They show a greater mobility in health; there is also a greater mobility in disease. The slightest disturbance ends in fever in children. So you can see the significance of fever. I might go on and say that to my mind fever is part of the disease, and not so terrible as some physicians lead us to believe. I have seen so much fuss made over temperatures that I believe most physicians think that the *fever* is the main thing. It is part of the trouble, and probably it is conservative. Unless it lasts too long it should not worry us so much. The time has gone when the patient is filled with antipyretics. Antipyrine, antifebrin, aconite, etc., may bring the temperature down, even though the patient be brought down with it. In heat stroke I do not know what else to do except to get rid of the heat by placing the patient in the tub with big pieces of ice, and so extract the heat, and patient in this treatment may recover. But do not give more antifebrin or antipyrine, because we must save our patients, and these drugs exert too great an influence on the heart to be used with safety. I have seen a temperature of 105 degrees and a fraction lasting three days disappear where nothing was given for the fever. Fever was due to some ear trouble; the ear was treated, and when the discharge disappeared the patient got better, and the fever went rapidly down. In this latter case I did not even mention the amount of fever the child had to the mother, because I knew I then would be forced to use antifebrin or antipyrine. In typhoid fever bring down the temperature with cold water; this cold-water treatment is not so much to bring down the temperature as it is to give tone to the nervous system. The simplest of antipyretics is cold water. There is now a patient in the ward who has a temperature of 104 degrees and 105 degrees, for whom was ordered sponging with alcohol and water. At the end of a week I found the orders had not been carried out, the patient having been sponged but once in twelve hours. This was a case of typhoid fever. The patient was placed in a cold bath and the temperature was brought down to 101 degrees, but in two hours it went back again to 105 degrees, although the nervous symptoms seemed to be better; a sponge bath was then ordered to be given every three hours with a solution of water and alcohol (25 per cent.) and then the temperature stayed down and did not go up again. Sometimes it is necessary to place your patient in the bath or tub. I have sometimes thought that if there were no thermometers the patients would probably be better off, because the temperatures shown by these thermometers so often result in too active measures, which the patient could do better without. In old times there were no thermometers, and the patients got along well. Thermometers are all right if you do not pull your patients down with them. I advise you all to grasp the significance of fever. I have known patients with pneumonia to get large doses of quinine, which was followed by a fall in the temperature; the quinine got the credit, when the fever would have gone down anyway. Twenty years ago twenty grains would be given at night, and the next morning the temperature would be found to be normal, and the quinine would get the credit; if the quinine had not been given the temperature would have gone down anyway. I now sometimes wait to see if it will go down itself.

CASE I. EMPHYSEMA.—This man has had a cough for five weeks. He has exaggerated resonance and diminished intensity of breathing; he has emphysema. There is an interesting point here. I listen to him and I do not hear the heart. Just such a thing as this occurred to me when I practiced in the country. A man was supposed to have an attack of heart failure; digitalis, strophanthus, etc., had been given him by his attending physician. I had occasion to go to his house to see a child, and I looked over the man, after having much trouble to get him to let me do so. I examined his chest and found the heart sounds absent, but there was a well-marked emphysema. The attacks were from the associated asthma. I took hold of the forearm and felt the radial artery, and found a very good pulse. There had been no heart failure at all. The next time he had an attack of asthma the heart sounds were absent, but the radial artery was all right and no heart failure was noted. Antispasmodics to relieve the spasm of the lungs were given, and he got along very nicely. In this case the lung overlaps and so muffles the heart sounds; proof of this condition is the strong radial artery pulsation.

In this patient I find no physical signs. A man with such a good build and evidences of such good health, the diagnosis must be made by exclusion. He had a trachitis; the inflammation not extending to the bronchi. There are no evidences of anything else at all. A great many of such cases used to get into Bellevue Hospital, and the physical signs were found to be negative; these were simply cases of trachitis.

In these cases Hoffman's anodyne and iodide of potassium are given for the cough.

CASE II. INCIPIENT PHTHISIS.—This man has had a cough for six weeks. He has lost no flesh and has had no night sweats. The breathing is not so good in this man, but I do not get any physical signs. There is no dullness, and the resonance is the same on the two sides. I think this man probably has incipient phthisis.

CASE III. ANEURISM OF THE ABDOMINAL AORTA.—This woman came into the hospital complaining of diarrhoea, which seems to have been controlled by bismuth and salol. There was a systolic murmur. This was present when she came in, and there was also a pulsation to be noted over the abdominal aorta. You can all see how pronounced this pulsation now is. The aorta is certainly enlarged, dilated. This is probably an aneurismal dilatation. There is no dullness over the area of the pulsation, except on deep pressure.

MEDICAL CLINIC ON DISEASES OF CHILDREN, HELD AT THE POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL, ON DECEMBER 20TH.

BY DR. AUGUSTUS CAILLÉ,

Professor of Diseases of Children; Attending Physician to the Babies' Wards, Post-Graduate Hospital; Visiting Physican to the German Hospital; Consulting Physician Isabella Home and Hospital.

CASE I.—PUSTULAR ECZEMA.

Gentlemen: We have some very interesting material to show you this morning. Do you remember this little girl? Some of you have seen her before. She has a pustular eczema. Remember, I told you to look for a nasal discharge, and it will be usually found in cases where the situation of the lesions is as seen in this subject. The

ordinary method of treating these cases with plasters and salves is an unfortunate one. If you wish to get rid of it altogether you should scrape off the scabs and then cauterize the bleeding points with nitrate of silver. The plasters and salves clog over the eczema and do no good; the glands become infected, and the patient becomes worse than she was before treatment. The proper way to treat these cases is to simply scrape away the scabs rather forcibly, as I am now doing. Then the bleeding points should be cauterized with a solution of nitrate of silver, 10 grains to the ounce, and then the parts compressed for a short time until the hemorrhage stops. Over this then is placed zinc ointment to protect the parts. In about a week the eczema should heal over promptly.

CASE II.—JAUNDICE NEONATORUM.

Here is a little baby, who, if held in a good, clear, light, would be found to have a yellow color. This is an ordinary case of jaundice neonatorum. This child is thirteen days old, and there is nothing wrong except this yellow color. The pathology of this condition has not been cleared up, and there is no treatment so long as there is no fever. The treatment is really immaterial, for these cases usually get well, no matter what you may do. These cases are quite common, but remember there is no treatment to be directed to it if the case be not one of infection.

CASE III.—ADENITIS, A SEQUEL OF SCARLET FEVER.

We have here a little fellow with an adenitis on the right side of the neck, following scarlet fever. Now, you can treat these cases by running in a dressing forceps after incising into the tumors, and so break up the glands, and in that way get rid of the trouble. But the surgeons here prefer to remove the glands entirely, so this child will be placed in the ward and that operation will probably be done.

CASE IV.—CHANCRE OF LIP.

This is a very interesting case, indeed, and one that is extremely rare, and I want you all to come down and see this case closely. I call your attention to this lip, which you see is very markedly indurated with enlarged glands on the same side as the lesion below the angle of the jaw. There is no adenitis on the opposite side. This is a chancre of the lip, and I caution you, gentlemen, to be careful and wash your hands after handling it. The upper lip is infiltrated and hard, as also is the submaxillary gland. There is a complete history of infection from some one in the family. This is a hard syphilitic chancre of the upper lip with adenitis; the history of syphilis is very clear in this case. This child's parents had a boarder who was syphilitic and who had been kissing the child. This child should at once be placed upon mercury by the mouth, and the same time by inunctions, in order to get him under the influence of the drug as soon as possible. The prognosis is favorable in children of that age. This is really a most unfortunate case, getting syphilis in that way. The treatment should be kept up for a year, and then stopped for a few months, when it should be again resumed. I have seen the same person attacked twice in a period of twenty years. The man had syphilis with all the secondary symptoms, and was under treatment for seven years; after a few years he again was stricken with this trouble, with all the secondary lesions of the first attack. I believe a great many have seen this same feature.

CASE V.—ACUTE MENINGITIS.

I have here to show you a case of pneumonia and also an acute meningitis, evidently a grippe meningitis. I believe Dr. Chapen has shown you the case before. The case was brought in with a normal temperature, and it suddenly rose to 104.5 degrees, with accompanying symptoms of acute meningitis. My colleagues here will find in the babies' ward a tubercular meningitis, which is moribund, and which has been watched a long time. Whenever a case of meningitis is tubercular, we learn that fact from lumbar puncture and microscopic examination. By lumbar puncture you get nearer the truth. This procedure is calling forth a considerable amount of discussion; but its value has about been settled, not as a therapeutic, but as a diagnostic measure. This child is still in the excitable stage, but I will attempt to do it. The land-marks used in performing this operation is about as follows: I want to go between the fourth and fifth lumbar vertebra. The position of the child should be the sitting posture, with the body bent forward and the spine so curved that the spaces between the vertebrae will be increased to afford greater facility in getting in. A good plan is to draw a straight line across from one iliac crest to the other to locate where you wish to enter. Then place the finger tips upon the spinous process above and on the spinous process below. With the finger nail we then make a mark which will be the guide to the point of entrance of the needle of syringe. With the needle in the proper direction, I now endeavor to get into the space, taking plenty of time. Now, I believe I am in the space, and please notice that as I withdraw the piston of the needle a fluid follows the barrel of the syringe. After the removal of the needle cerebro-spinal fluid can be noticed oozing out through the puncture. Take care that the child is properly held, or the needle may be broken off. If you go in too far you may puncture the plexus of veins, which will give you troublesome hemorrhage to deal with. One should first practice on a cadaver and then it can be done quite readily. Now, what does puncture do? It gives you a fluid which can be examined and possibly show the presence of the streptococcus, or the staphylococcus, or the pneumococcus, or you may find a sterile fluid; anyway, this procedure will reduce the pressure by removing part of the fluid. Two or three ounces can be removed in this way. This, that I have removed appears to be a little turbid, not much so. According to my personal experience the cerebro-spinal fluid that becomes clear is not likely to be one of the varieties of meningitis which will produce pus. We will examine this fluid and report to you later what we find.

As regards the treatment of this child, of course there is no specific treatment in this stage. Assuming that the salicylates have some specific action upon some forms of microbes that produce rheumatic fever, it would not be out of the way to give salicylates. Nor would it be out of the way to give a dose of quinine; if there is any malaria in this meningitis one should give a specific does of quinine. I believe quinine should be given anyway, to be followed later by the salicylates. Otherwise treat the case symptomatically.

CASE VI.—PNEUMONIA.

This child is just recovering from a pneumonia, and now there is some dullness, bronchial breathing and the typical signs of a pneumonia. This shows well the tubular breathing, and other signs, and I wish you, gentlemen, to come down and listen to this chest. This little one is in complete defervescence. A grippe-pneumonia in children is rather distinct. As a rule, there is some diarrhoea, with sudden onset and intense redness of the pharynx. This case is quite characteristic.

In regard to the treatment of grippe cases there is no specific yet known. When taken in the very beginning quinine and phenacetine, three grains of each in children and eight grains of each in adults, with stimulation, is given, under this medication they usually get along nicely. The treatment of pneumonia accompanying grippe is no different from the treatment of any other pneumonia. So soon as the grippe bacillus is discovered and we can get the antitoxin the treatment will then be very simple, but with our present knowledge of the disease the treatment must be symptomatic. In grippe-pneumonia do not hesitate to place the patient in the wet-pack, so long as the circulation is good; use the warm bath gradually cooled down to eighty degrees; before using this method it would be wise to see if the child's feet are warm.

CASE VII.—PHIMOSIS.

This child has a phimosis. Any colleague here who wishes to perform the operation of circumcision can come down and do it, and we will assist him. If this was a dispensary case, to be sent away directly after the operation, it would be a good plan to use black thread in sewing, because it is easy to find it after a few days. In dispensary work also use iodoform or bismuth ointment, applying the ointment to the parts every time the child urinates. In dispensary practice you cannot make an antiseptic dressing as you could in private practice. If cat-gut is used, it becomes absorbed, and does not necessitate removal, but I do not like the knots that must be used.

Why do I use ether instead of chloroform in this child? On account of the prejudice. If chloroform be given and

anything should happen, and the child should die, the coroner's jury would make it very unpleasant for the physician; whereas, if ether be given it would probably be all right.

REPLACEMENT OF RETROVERTED UTERUS—PYLORIC OBSTRUCTION WITH MISLEADING SYMPTOMS—THE PERCENTAGE OF MORTALITY IN OPERATIONS FOR APPENDICITIS.

By John B. Deaver, M.D., at German Hospital, Philadelphia, Pa.

The patient upon whom we are about to operate comes to us with a retroverted uterus and an enlargement on the right side, believed to be a distended tube, with also a prolapsed ovary on that side. There are many ways of treating this condition of the uterus, of replacing and of keeping in place after being restored to a normal position. Of the inoperative methods I prefer the dilatation and replacement of the organ, and keeping it in place by a Smith-Hodge pessary, which, in my experience, is the best appliance to use. But the disadvantage of these methods is that the original trouble is apt to recur. This leads us to the permanent plan of operation, and here again are many methods of procedure. Some prefer the Alexander method of shortening the round ligament. In regard to this, it is amenable to execution only when there are no adhesions. In these cases some advise opening the abdomen and breaking up the adhesions and then shortening the ligaments. My objection to this method is the difficulty experienced in finding the round ligament. In doing this operation I never approached it with confidence enough to be sure of finding the ligament and separating it from the surrounding tissues. One practical anatomist of this city, who is teaching anatomy and dissecting during nearly every day of his life, asserts that one is never sure of perfectly isolating the ligament. The intra-abdominal shortening of the round ligament is the best operative procedure, in my experience. Vertral fixation of the fundus is in my opinion the most irrational surgical proceeding that has ever been advocated. Adhesions are the worst thing that a surgeon has to contend with in abdominal surgery, and is constantly fighting against this result of his operations. But in ventral fixation he puts in just what he otherwise wishes to avoid. I have seen two ruptured uteri resulting from this method, and I speak strongly against it.

MALIGNANT GROWTH IN PYLORUS.

This woman has vomiting some time after taking food and has lost twenty-five pounds, but we are not sure as to the length of time in which this loss occurred. An examination shows the stomach to be a little large, but this condition might be normal in this individual. Chemical and microscopical examinations show the presence of hydrochloric acid in the stomach, and a normal blood count. The urine is negative, as is also the heart. We have here then no contraindication to operation, and have probably to deal with non-malignant pyloric obstruction.

Among the methods which may be adopted here are divulsion, pyloroplasty and gastro-enterostomy. I do not think the latter an advisable operation, unless there be a growth which is irremovable with safety. This might also be done if the walls of the stomach are in an atonic condition, though this condition is apt to be present if there has been obstruction for a long time. In the majority of instances it is better to do the first or second mentioned (preferably the second), and leave the latter to be done as a last resort later on if necessary.

I make my incision through the rectus muscle and expose the stomach, after having washed it out thoroughly with boracic acid solution. The walls of the stomach are thickened and edematous. An examination shows a malignant growth, involving the pylorus, extending some distance into the duodenum, and bound to the liver by firm adhesions. In our opinion this cannot be removed with safety, and we will proceed to the operation indicated in such cases—gastro-enterostomy. I do this without apparatus of any kind, suturing the parts together, making an incision in each and sewing the adjacent edges together. I like this plan, because it does not limit one to any special length of the opening. I like a large one and make this three to four inches in length. The sewing is done in a very few minutes.

It will be noticed that there were only two things in favor of malignancy in this case, those being the age of the patient and the loss of weight. But the latter is hardly an evidence, as this would happen to any person who was rejecting their food for a time, instead of having it digested and absorbed. The case shows the inefficiency of chemical and microscopical tests at times. They are of value and should be made in hospitals, where it is possible, as this cannot be done in private practice. But at the same time good common sense and previous experience must enter largely into our diagnoses, even where these tests are made. The blood count did not show leucocytosis in this instance, because there is as yet no ulcerative absorption. Speaking of this point, it is claimed by some that this count is of value in determining the condition of affairs in regard to appendicular abscesses, etc. I believe that the time spent in looking for leucocytes had better be utilized in removing the appendix.

STATISTICS OF THE GERMAN HOSPITAL.

We have lately made a report of our cases of appendicitis operated on in this hospital, and find that the percentage of mortality in all cases operated upon, favorable or unfavorable, is 7½ per cent. In the acute cases the percentage is 19½ per cent. As regards the chronic cases we have now operated on 125 straight cases without a death. This favors the general idea that early operation is best. It may be said that it is no wonder that the mortality is so large in acute cases, because in every case we remove the appendix. In answer to this I say that the figures of as good an abdominal operator as there is in this country, which have been published lately, gives a mortality in similar cases of 22½ per cent. He does not remove the appendix in all cases. This would still indicate its removal in all operations.

CORRESPONDENCE.

THE HYPODERMIC USE OF QUININE IN MALARIAL FEVERS.

Until the present summer the physicians of the temperate zone have not had the opportunity of seeing extensively the severer forms of malarial poisonings which are so common in the tropics. The Spanish war has given them the chance to see the conditions under the most virulent circumstances, both in the field and at home in the returned soldiers. As a result, they have been forced to use severer measures in treating these conditions, with the result that having found these measure efficient they are now beginning to use them in the more ordinary forms of disease. Such, for example, has been the result in the use of quinine hypodermically.

The following case well illustrates this advance in the ideas of the home practitioners. A soldier, eighteen years of age, was admitted into the Pennsylvania Hospital with the following history: On Sept. 13, while at Santiago, he was seized with chills and fever, and was taken to the "Yellow Fever Hospital," being considered a yellow fever case. He had four chills during the attack, was slightly jaundiced, had persistent headache and vomiting during the chills. He was in the hospital one month, making a good recovery from what was an attack of malaria. He returned to this country about Nov. 1, and two weeks after was taken with chills and fever again. After admission he had a chill every day for four days, since which there has been no paroxysms. An examination of the blood shows the tertian parasite. This illustrates the fact that, although the tertian and quartian are the most common forms of the parasite in temperate countries, and the estivo-autumnal the type of tropical countries, yet each form does exist in both places. We have here, then, a fever of the double tertian variety, and there is this interesting fact about it. During the paroxysms on the first and third day his temperature rose to 103 degrees. On the second and fourth days it reached 104 degrees. This would indicate that the one brood was more virulent than the other, thus causing a greater degree of toxemia when sporulating.

Another patient in the same hospital was a boy of six-

teen who had been a messenger boy at Santiago. He had chills and fever during July, and later in the division hospital at Montauk Point in August. He had two chills after admission to this hospital. The other patient is a man of thirty-six, who was an engineer in Nicaragua. During July and August he suffered ten attacks of what they called cholantura. This was a fever lasting twenty-four or forty-eight hours, passing off with a sweat. On Sept. 18 he fell unconscious, and was practically comatose for twelve days. As soon as he was better he was sent home. He had no chills after admission here, but his blood showed malarial parasites. He was cachectic and the blood showed a count of 2,550,000 red cells and hemoglobin 60 per cent. He had lost fifty pounds in weight. The treatment had been the same in all these cases. This has been the giving of five grains of the hydrochlorate of quinine hypodermically three times a day. In addition to this, the engineer was placed on five drops of Fowler's solution three times a day, and this has been increased to seven drops, and will be raised until a distinct effect is noted. He is still somewhat anemic, but has gained nineteen pounds.

The chief reason for beginning the quinine hypodermically in the first case was that the last paroxysm occurred after twenty grains had been given by the mouth during the twenty-four hours preceding. But there is no real reason why it should not be given always in this way. There are two objection generally advanced against this method. First, the pain caused by the injection, and second, the formation of abscesses at the point of puncture. The quinine is dissolved in a syringe full of warm distilled water; after injection, pain is slight and continues for only a short time. As for the abscesses, no sign of such result has been seen as yet.

It is the belief in this hospital that in every severe case the quinine should be thus administered. There are many reasons why the drug, if given by the mouth, may not get to the desired destination. Of course this may not happen in a great many cases, but the liability is present in all. Pills given may be old and hard, and may pass through and appear in the stools without being changed. Again the stomach contents may be alkaline or contain a limited amount of fluid, and thus fail in causing a solution. This would obtain to a lesser degree in capsules even. Now, in very severe cases, where there was danger of coma or a congestive chill after a paroxysm, even a remote chance of the drug not being absorbed should be avoided. It is but little more trouble to give the drug hypodermically.

These latter cases are instructive, as showing how the parasite of the irregular type of fever exists in the blood after the giving of quinine for some time. This man has had at least thirty-five injections of five grains each. Three points which apply especially to the estivo-autumnal fever are: First, keep the patient in bed; second, give a liberal amount of the best sort of diet; third, do not consider the patient as being cured until the parasite cannot be detected in the blood.

J. H. A.

THE PRESENT WAR ON TUBERCULOSIS: WATER WILL NOT RUN UP HILL.

So long as our boys and girls keep up their wheeling, golfing, tennis work, skating and all that sort of thing in the free open air, we shall doubtless be spared the necessity for shooting them as the supposed only means of "stamping out tuberculosis;" they will never have the disease.

"With the Prince of Wales presiding at a meeting in London to promote the war on tuberculosis, with addresses on the subject by Lord Salisbury and Lord Rosebery, and with the announcement that a large number of the Queen's cows have been killed, after having been found to be tuberculous, the fight for the eradication of this most deadly of all diseases may be said to have begun in earnest in Great Britain," says an editorial note in a morning paper. "It is interesting to note that the British authorities allow that the lead in this crusade has been taken here in the United States, and that our example in this direction is one that ought to be followed wherever consumption flourishes."

It is enough to make a horse laugh, as the saying goes—all this hue and cry and "slaughter of the innocents;" particularly as the horse usually escapes the conditions that promote the disease under consideration, his need of exercise and proper diet being very generally recognized. From an article by the present writer in the January, 1895, issue of the *New England Medical Gazette* (Boston), on "Tuberculosis in Cattle; the True Remedy Will Be Found Alone in Hygiene," much of the following is taken:

"It is now suspected that the cow that jumped over the moon was tuberculous," says the Boston *Herald;* but the point of this little joke is dulled somewhat from the fact that athletics is both a preventive and cure of the disease. It is rather the cow that is clumsy, walks with slow and logy pace, is fat, big bellied, and altogether out of condition, from unhygienic surroundings, and that couldn't jump over anything, that has tuberculosis, is diseased through and through, in fact; while the ones that have freedom in the open air, natural exercise and rational diet, are kept sprightly and in condition.

In truth, out of all the thousands of dairy cows "driven" (that is, grossly fed) for an abnormal yield of milk, while they are deprived of exercise and fresh air, there is not one really healthy creature; there cannot be one. Outside of our working oxen, the only healthy cattle are the herds on the plains, as the only healthy hogs are the ones that roam in freedom, getting a deal of exercise in the open air, with rather scant feed much of the time. The "razor-backs" of the South are as thin as a greyhound, and as fleet of foot, and compare with our domestic hog as hard-working oxen or the cattle on the plains do with stall-fed cattle and dairy cows.

"I fatten my cattle," said an intelligent and observing young farmer, "because it pays. The market demands fat creatures, so I have my barn very snug and warm, and feed high. My neighbor, on the other hand, is what is called a poor farmer; that is, his buildings are not of the best, his barn has broad cracks all around, which gives them pure air, and his cattle are never fat. He works his oxen hard, gives them enough to eat to keep them in full health and vigor, but nothing for surplus adipose. Mornings, in winter, when he turns them out into the yard, they prance out like a lot of colts, kick up their heels and shake their horns like healthy creatures, as they are, while mine will almost tumble down over the door sill! His cows never give as much milk nor make as much butter as mine; but they are never sick, while mine often are, and I lose one now and then with milk fever, or some other disease resulting from high feeding; but I am farming for profit, and my heifers bring an extra price by reason of the great milk and butter record of their mothers, and I can afford to have a sick, or, even a dead cow, occasionally, providing I keep the fact quiet—not advertising the danger of the process necessary to 'drive the milk out of them.'"

In the course of an editorial on certain matters pertaining to legislation, the editor of the *Herald* says: "The whole order of nature proclaims a law of evolution of final symmetry through the conflict and resolution of antagonisms. Certainly the best of all symbols of the harmonious workings of the State is that of the harmonious workings of the human (or animal) body. The body can be kept in order only on the system of strict proportional representation. Before the tribunal of the governing reason the stomach puts in its claim to consideration, and the muscles theirs, and the heart and brain theirs. If the brain insists on sponging up all the forces for thought and study, the stomach raises an outcry, and the muscles sag, and the nerves say, 'Then, hang it, we won't sleep!' In vain does the brain plead, 'Oh! I will represent you all.' 'You cannot represent the digestive functions,' says the stomach. 'No, nor the respiratory,' says the lungs. 'If you do not let us represent ourselves, with full supplies of gastric juice and full supplies of fresh air, we will show you what a wretched tenement house we can make of the body.'"

In another column of the same issue occurs the following editorial note: "The war begun by the cattle commissioners against tuberculosis is being waged with a vigor and earnestness that betokens its extermination. It seems likely to play havoc with a great many herds of cattle, but the eradication of this disease from Massachusetts is something that can only be accomplished by heroic remedies, and that is the kind that is being applied." Manifestly, these two paragraphs were not penned by the same hand, and, in the writer's opinion, if the editor is really the possessor of so much bed-rock hygienic knowledge as is indicated in the first quotation, he might well assume the task of treating the subject of tuberculosis and of suggesting

the true remedy, viz., prevention, and not simply the execution of all the "patients," every one of which might by hygienic treatment be restored to sound health.

Something like a dozen years ago, at a meeting of the New Orleans Pathological Society, Dr. H. D. Schmidt, whose researches had been extended and minute, made an important microscopical demonstration for the purpose of disproving Dr. Koch's so-called discovery as to the cause of tuberculosis, showing that the condition of the lungs of patients dying of consumption was one of fatty degeneration, and the bacillus nothing less nor more than a scavenger of diseased tissue. This view has long been held by the present writer, that the disease known as tuberculosis, whether in the lower or higher animals, is, strictly speaking, one of tissue degeneration from fat, and manifestly no regimen could be devised, better calculated to produce it than that which has thus far proved pecuniarily profitable to the dairy farmers and beef producers, and which has been so aptly described by the young farmer whose language has been quoted.

Dr. John M. Parker, in the Boston *Medical and Surgical Journal* for Nov. 29, 1894 ("Sanitary Condition of Dairy Farms,"), goes to the bottom of this whole matter and shows such a deplorable and disgusting state of things among the greater proportion of dairy barns, that the wonder is that in some of these a single creature should go through the winter alive. By his tabulation of the condition of twelve barns he shows that eight out of the twelve have the manure in the cellar under the cows, and in these the stench was so great as almost to forbid breathing, for any one unaccustomed to the condition. "In only three farms out of the twelve," he says, "you will notice, is there any attempt at ventilation, and even in these it is more in name than fact. And in no single barn that I have been in is there any provision made for the admission of fresh air." "In the great majority of dairy farms," continues Dr. Parker, "there is not even a trace of ventilation, while the cattle are packed in as close as they can conveniently be put. A cow has about four or five times the lung capacity of a man, yet on many of the farms each cow has only a tithe of the space required by a child under seven years of age, and that without ventilation!"

While our herds are deprived of exercise, of fresh air, and of light (the greatest germicides known, these two last), and at the same time fed beyond reason, why should all the attention of our commissioners be given to the mere discovery of the especially diseased ones among the victims of abuse, and to their slaughter, instead of having the wrong condition righted, thus giving us healthy cows and a supply of really wholesome milk, even if we must pay a higher price for it, as undoubtedly will be the case?

It is unquestionably true that cows that are kept in a healthy condition, by the only possible means, viz., giving them plenty of out-door exercise, and plenty of fresh air in the barn, both night and day, and no more food than required for their best nourishment, with freedom from crowding, that is, giving plenty of room for each individual, and hence a smaller number kept by each farmer—will give less milk; so that the farmers must have a larger price for what amount of milk they can supply. They must either invest more capital and keep a great many more cows, at greater outlay for barns, or be content with producing a small amount of milk, the cost of production being enhanced in any case. CHARLES E. PAGE, M.D.

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"SIGNATURES" AND "SIMILIA."

At the British Homeopathic Convention, held this year in London, Dr. John Clarke, well known as the editor of the *Homeopathic World*, and author of numerous Hahnemannian text-books, read a paper on "The Doctrine of Signatures and the Law of Similars," which provoked considerable discussion both among his immediate hearers and after its publication. Several of his more prominent colleagues (among them Dr. Dudgeon and the president of the convention) took occasion at once to disavow the opinions set forth by Dr. Clarke, and to repudiate the idea that the ancient dogma he advocated should be regarded as having any real affinity to homeopathy. On the other hand, not a few of the members present coincided entirely with the reader, and even brought forward additional facts and arguments in substantiation of his views. Dr. Clarke said, "It would almost seem that it is to be the lot of homeopathy to rehabilitate the ancient doctrine of signatures developed and glorified by Parcelsus, and possibly utilized by Hahnemann himself and the older homeopaths for suggestions as to the properties and clinical observations." Now, this doctrine of signatures was based on the *a priori* assumption, as expressed by Paracelsus himself, that God "maketh medicines out of the earth and marketh them so that we may recognize their uses." If we look closely at the so-called therapeutic law announced by Hahnemann, and the arguments by which he attempted to establish it, we shall find that he too pursued this fallacious, theological method of reasoning. Quite evidently, he, like Paracelsus, had a theory that God had created things for man and that he had along with disease created remedies for every form of disease. But Paracelsus, unlike Hahnemann, looked *outside* the body for the indications for their use. With each of these medical reformers it is similars curing similars—only, instead of finding the signatures in the outer world, the sage of Meissen found them in the symptoms of the disease itself. When it came to experimental proof, that single alleged pathogenetic result from cinchona bark had to support the weight of his whole system; for, certainly, the great bulk of subsequent "provings" can not now be accepted as contributions to positive science.

The fact is—and it may as well be plainly stated—the final verdict of science upon the merits of homeopathy has at length been handed in. The parallel so persistently drawn by homeopathists between the case of their founder and that of Harvey, Jenner, and other great discoverers, has lost all its force. No demonstrable truth, resting upon a law universal in any sphere of nature, could, after a hundred years of controversy, be calling in vain for recognition upon the general intelligence of such an age as ours. Forty or fifty years ago, as we well remember, there was not a follower of Hahnemann who did not fully believe that the Master's teaching were destined to be adopted long ere this by the whole medical and scientific world. Instead of which, we behold the sons of similia's foremost champion abandoning their hereditary creed, and becoming "regular" practitioners, or even teachers in "allopathic" institutions! Why is this? It is simply because "the trends of thought" (as a contemporary expresses it) "are all away from the conceptions that obtained when homeopathy was born." We therefore see nothing, either incredible or shocking in the following editorial paragraphs from a recent number of the Cleveland Medical Gazette, under the heading "Homeopathy in Cleveland": "Since the American Medical Association has sanctioned the admission of medical students and graduates from homeopathic schools to college members of the association, upon essentially the same terms as students from other schools, there has been a constant stream of homeopathic students into the regular schools of this city, and a number of eminent homeopathic practitioners have matriculated and graduated from the regular schools and entered the regular profession.

"If we are properly informed, five of six professors of the homeopathic school have resigned their positions this fall and have matriculated in the College of Physicians and Surgeons, with the intention of entering the regular profession in the near future.

"As a matter of fact, the practitioners of homeopathy in this city have been such only in name for many years, and this would seem to be an auspicious time for the entire homeopathic profession to abandon their exclusive title and become regular physicians in name, as well as in practice." G. L. F.

To the Editors of THE MEDICAL TIMES:

The subject of prenatal impressions is often alluded to in the medical publications of the day. It is of interest to womankind generally, as well as to the august body of professionals who contribute to your columns, so will you allow a "lay reader" to present a few points, not "idle tales," but facts known to be strictly true from interested and personal observation. A bright, healthy young woman looking forward to motherhood accidentally upset and spilled a bottle of claret. In her dismay she very naturally covered her face with her hands. Her child carried a striking red birthmark as long as she lived. Her face was almost entirely a deep wine color. For more than fifty

years this unfortunate woman was known everywhere as "Red Sarah."

And why was it that an expectant mother, bemoaning the fact that the artist left his work unfinished, as he put upon canvas the semblance of her lost little daughter, brought into the world a son with a hand missing, just corresponding with the unfinished picture? In this case it was not the effect of shock or fright, the usually given causes. The mind was allowed to dwell upon the why and the wherefore of the unfinished work, and all intermingled with regret. What was the precise mental effect that caused exact similarity of the living and the painted imperfection? Was it the result of mental disturbance—a sort of freak of the imagination, or some "mental science" beyond human ken?

If, as asserted in the *Medical Record* of Nov. 26, "there is no connection between the nervous system of the mother and the nervous system of the unborn child," then the matter seems more inexplicable than ever. It seems the nerves *must* play an important part in the mischief, but to make it plain, "*there's the rub.*" It is something hard to make clear, this influence of the mother's mind upon the formation or malformation of the child unborn. After years of study and research and practice in this direction, this seems to be one thing "past finding out." Maternal impressions, their ill effects, are common enough, but who ever heard of paternal impressions? Let me give an instance I know to be strictly true, being intimately acquainted with all the parties.

John Barrows was engaged to be married to Sarah Grey, but he met another young lady whom he preferred; so he went to his betrothed and frankly stated the fact. After the first surprise and shock were over, the young lady exclaimed, "John, oh, John! How *could* you forsake me? How *could* you?" The false lover stood transfixed in utter silence. The wrong he was doing seemed to overpower him. Then revenge—with her—seemed to come forcibly to the front, and she said, "Well, John, *go!* but I only hope that every child you ever have may be *as dumb as you are!*"

They parted. He wedded his second love. Four children, perfect in form and beautiful to look upon, came to the pair, but not one ever spoke. All were totally deaf, though both parents had perfect hearing. The father always kept from the mother the dreadful secret—the parting imprecation that must have rung forever in his ears as he looked upon his bright and lovely boys, who all lived to reach man's estate.

Was not this a plain case of *paternal* impressions, and were not the sins of the father most pitifully visited upon the children?

It seems the whole subject of prenatal impressions is one of the deepest of the deep mysteries of life.

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TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine, New York, Etc.

The Modern Treatment of Locomotor Ataxia.—Dr. F. W. Langdon says that the revolution in our conception of the pathology of tabes has worked a similar revolution in its therapy. The mere fact that we have not primarily a sclerosis to deal with renders the indications for treatment more clear and the prognosis less gloomy (*Am. Med Surg. Bull.*). It is conceivable that early diagnosis and efficient treatment while the destructive changes are limited may bring about an arrest of the disease, and even a certain amount of restoration of lost function, by (1) limiting the degenerative process to a small number of neurons; (2) by possible reproduction of certain nerve-endings, as in ordinary multiple neuritis from alcohol, lead, etc.; (3) by promoting an increase in functional power in endings still competent, but lowered in vitality and function.

In the modern treatment of tabes, the old idea of giving alteratives, mercury, and potassium iodide for their (doubtful) absorbent effect on cicatricial tissue, is giving way to measures addressed to the nutrition of the neuron. There being no syphilitic exudations in true tabes, antisyphilitic treatment is uncalled for. Diet, hygiene, rest are the main factors in the successful management of the disease. Digestion, assimilation, elimination must be promoted. Climate, medicines, and electro-therapy are of distinct value.

Distressing symptoms, the lightning pains, etc., are to be alleviated without impairing the general nutrition. Opiates are better avoided.

Rest in bed is very valuable. The patient should sleep much and work little. The diet should be liberal—meats, fats, milk, water in abundnce, and fruits, with a minimum of starchy and saccharine foods. Alcohol is to be prohibited

The patient should wear warm clothing, and if possible spend his winters in a warm climate. The skin, kidneys, and bowels should be stimulated to the elimination of autotoxines. Drugs of more or less use in treatment are those of nutritional value, mainly phosphorus, iron, cod liver oil, with tonics, such as strychnine.

For the lightning pains aluminum chloride (dose 2 to 4 grains in water) is a drug of considerable value.

Electricity is of distinct value in a large proportion of cases. Ordinary faradism is useless, galvanism better. The writer's experience has led him to value highly that form of electricity known as the "sinusoidal" current. It is a current of high potential, rapid alternation (480 to 1920 per second), and comparatively small amperage. Its application is simple and controllable, as well as pleasant to the patient. It is administered by means of a foot-plate and a neck-electrode for from 5 to 15 minutes every alternate day for six weeks. Under its use, with simple hygiene and often without drugs, the lightning pains cease, the ataxia disappears and the general well-being of the patient is promoted. This six weeks' course of treatment may be repeated once or twice yearly. Patients treated by the foregoing methods have been under observation for nearly two years without return of the pains or ataxia. At the conclusion, the author says that the prognosis of locomotor ataxia is distinctly more hopeful now than it was several years ago

Staphisagria in Urethral Disorders.—Dr. W. E. Bloyer, of Cincinnati, O., gives in the *Medical Gleaner* (*Med. Council*) his favorable experience with this drug in prostatorrhea, spermatorrhea and other genito-urinary troubles. He prescribes one dram of the tincture in four ounces of water, giving one teaspoonful every four hours. He states:

"We prescribe no other remedy with greater confidence, and we add no other to it. It relieves the blues, and gloomy forebodings. It quiets disturbances and uneasy feelings about the bladder, urethra, testes, vesiculae seminales. It is often the remedy for gonorrhea, especially in the later, or gleety, stages. Use staphisagria in ordinary doses, internally, when your injections do not seem to act as you expect. The nervous effects of gonorrhea frequently counteract all the effects of medicine. This remedy quiets the nerves, and, besides, it acts upon the kidneys, so that a freer flow of water follows, and the local applications have a better chance to relieve or cure urethral irritation.

RETROSPECTIVE DIETETICS

Milk Diet for Articular Rheumatism.—The tortures endured by patients suffering from articular rheumatism are in themselves alone of a violence and tenacity sufficient to induce the physician to endeavor to oppose to this disease a treatment uniting the three qualities, *cito, tute, et jucunde.* The milk diet seems capable of fulfilling this desideratum. The therapeutical views of M. Bigot on the subject, as given in the "Revue Mensuelle de Medecine et de Chirurgie (Diet. and Hyg. Gaz.) may be thus summarized:

The milk causes the temperature to fall rapidly below hyperpyrexia, and simultaneously assuages the pains in a period varying from three to eight days. The effects from these two points of view are more prompt and more powerful if the patient be submitted to the milk regimen at the outset of the affection. This milk regimen, without overcharging the stomach or raising the temperature, by its nutritive power and its facility of digestion, prevents in a great measure that characteristic and generally troublesome anemia left behind by attacks of rheumatism. Be-

sides these general effects, milk diet has a special action on the urinary function, which is clearly indicated in rheumatism. Milk strongly favors the elimination of all the waste principles accumulated in the organism; its exclusive use causes both the quantity of urine excreted in twenty-four hours and the quantity of all the saline principles dissolved in this liquid to increase rapidly. Density, on the contrary, experiences a proportionate decrease. The impetus given to the urinary function by a milk regimen allows a glimpse of the nature of rheumatism, its near and intimate causes. The analysis of urine seems to show that there is an accumulation of urates or uric acid in the organism of rheumatic sufferers, and that its diminution under the influence of milk is not one of the smallest benefits of this regimen.

The Effects of Mixed Diets on Salivary Digestion.—At a meeting of the Edinburgh Royal Society, July 4, 1898, Dr. W. Aitchison Robertson read a paper on the above subject. The research was made with the object of determining whether the digestion of starch was affected favorably or unfavorably by its admixture with other articles of food. He found that porridge formed a fairly easily digestible article of food, and that the greater the dilution of the porridge with water or milk the greater was its ease of digestion. In fact, well-made water-gruel was one of the most easily digested of foods. The reason why potatoes were so often badly borne by the stomach was probably due to the manner in which they were prepared. If, after being boiled, they were finely powdered, so that the saliva could gain ready access to the starch granules, they were easily and rapidly digested. On the other hand, when sent to the table whole, the probability was that they would be imperfectly masticated and swallowed in fragments of greater or less size. In such a case the saliva could only act on the outer surfaces of the fragments, and the result was a very imperfect digestion. In respect of the digestion of bread, the experiments showed that it was much less acted upon by saliva when eaten alone than when taken along with some indifferent fluid as water. Newly baked bread was not as rapidly acted upon by saliva as stale bread, but the ultimate degree of starch conversion was greater in the former than in the latter. So far as the experiments showed, stale bread was not more easily digested than newly baked bread. The addition of milk to bread caused a remarkable enfeeblement of the salivary element, while broth exerted a slight restraining influence upon it. Alcohol, even in solution, retarded salivary digestion of starch, but the action was much less marked than in the case of the infusion of tea. Wines had a very marked inhibitory influence on the digestion of starch by saliva, and that was almost wholly due to their acidity. Even after three hours' digestion in the presence of sherry, port or claret, the starch had undergone hardly any conversion.

The Use of Saccharin in Nourishing Infants.—Previous views have inclined to a belief that saccharin has little or no nutritive value, but is useful for sweetening infants' food, though there has been some doubt as to its effect upon fermentation in the bowels. Keller ("Centrlbl. F. Inn. Med.," Aug. 6, 1898) has made observations upon metabolism when this substance was used to sweeten infants' food, and reaches the conclusion that, when the only purpose necessary is to sweeten the food, saccharin is the best of all sugary substances. The nitrogen-absorption in his experiments was always good when saccharin was being used. The amount of ammonia excretion was not increased, but was rather somewhat decreased, so that there seemed to be less fermentation in the bowel. These observations are important, as it is often difficult to use sugars in nourishing sick infants without increasing the acid intoxication that frequently already exists. In our experience, saccharin should be used with great caution, as in same cases it irritates the stomach.

Meat in Lithemia and Gout.—In summing up an article on this topic, in the Philadelphia *Polyclinic*, Oct. 1, 1898, Dr. Charles Baum declares that "apparently restored health and a feeling of comfort and happiness with willingness and ability to work will come to patients with lithemia and with gout, if they will omit meat from the diet and subsist upon milk with suitable vegetables and fruits. The secret of success is to lighten the labors of weakened lieminating organs."

Catheters and Cystitis.—R. Mayfield, M.D., New York. —Regarding the treatment of cystitis with the employment of this catheter, presuming that we have a typical case, with ropy, viscid, and tenacious mucus, the membrane thickened and possibly ulcerated, and in deep folds—"ribbed," as it were—we begin the treatment as follows:

1. Inject a quarter of a grain of cocaine dissolved in a drachm of water into the membranous portion of the urethra.

2. Anoint the largest hard-rubber catheter that can be well passed into the bladder, and increase the size one number each week until the urethra is normal in size.

3. Begin with dilute hydrogen solutions—preferably hydrozone—one part to twenty of lukewarm water, using this solution freely, especially when employing the large size catheter. If the small size is used at the beginning, I

recommend the use of only two or three ounces at a time until removed by the return flow. This can be repeated until the return flow is clear and not "foaming," which indicates that the bladder is aseptic.

4. Partly fill the bladder with the following solution: Tincture of iodine compound, two drachms; chlorate of potassium, half a drachm, chloride of sodium, two drachms; warm water, eight ounces. Let it remain a minute or so and then remove. This treatment should be used once or twice a day.

Where I suspect extensive ulceration I recommend once a week the use of from ten to twenty grains of nitrate of silver to the ounce, and neutralize with chloride-of-sodium solutions.

This treatment carried out carefully will be satisfactory, as there is no remedy that will destroy bacteria, fetid mucus, or sacculated calcareous deposits like hydrozone.

School Physicians.—Some of the primary schools in Germany have their own physicians. He watches over the class rooms and is there to show that questions of warming, ventilation, lighting and cleaning have entered into the kingdom of science whereof he is king. Once in every fortnight he gives instruction in every class in the school, and the text he preaches from is '*Sanitas sanitatum. om ia tas.*' *In* short, he is the health officer of the whole establishment, the priest of Hygeia, and the philosopher and friend of the teacher and the taught. The experiment was first made at Wiesbaden, and has been pronounced a success."

What an excellent plan for imitation in this country, and especially in this city, if it could be entirely disconnected from our wretched "machine politics!"

Kernig's Sign of Meningitis.—At a recent meeting of the Paris Hospital Medical Society ("Progres. Med.," July 30, 1898), M. Netter insisted upon the great value of a sign of meningitis described by Kernig in 1894. The sign is this: When a person in health sits up in bed with his leg flexed, he can straighten it out without difficulty. A person affected with meningitis cannot do it unless he lies down. Netter regards this sign as almost pathognomonic.

The Production of Abortion by Nitrate of Silve .—Perlsee ("Prague Med. Woch.," July 21, 1898) was called upon to bring about miscarriage in four cases of pregnancy complicated by nephritis and uncontrollable vomiting. He did this most successfully by the introduction of a stick of nitrate of silver above the inner os uteri. The stick should project about one-half inch from the holder, so as to disinfect the cervical canal as it is introduced. Pains came in from two to six hours after the cauterization. In every respect the delivery in the four cases was as perfect as could be wished for. The operation has the merit of simplicity, promptness, efficiency and is aseptic.

MISCELLANY.

—The Prince of Wales has made an uninterrupted recovery from his recent accident.

—The name of the New York Cancer Hospital has been changed to the General Memorial Hospital.

—Prof. Nasse, the first assistant of Bergman at Berlin, lost his life last month while mountain climbing.

—Dr. Weiss says that in all cases of local carbolic acid poisoning, alcohol is an absolute and immediate specific.

—Statistics of the Regents of the State University for 1898 show that 3,582 students of medicine have registered and 820 of theology.

—The report of the New York City Board of Health shows that in 1898 there were 66,161 deaths, 78,963 births and 28,877 marriages.

—Dr. Alvah H. Doty has been reappointed health officer of the port of New York. No more acceptable appointment could have been made.

—CONNECTICUT'S MEDICAL LAW.—The three medical examining boards agree that 75 per cent. of all questions must be answered correctly. This year 40 per cent. of the candidates failed to pass.

—A St. Petersburg physician finds that the application of an ointment of ten parts of ichthyol and eighty parts of lanotine prevent pustulation and abbreviate the cutaneous manifestations in small pox.

—A new dispensary bill, drawn up by the representatives of the three State medical societies and approved by the dispensary managers, will be introduced in the present Legislature and probably pass.

—The medical report of the French Army states that since the introduction of the serum treatment of diphtheria the mortality among cases of that disease has fallen from 11.3 per cent. to 6 per cent.

—St. John's Guild are building a second floating hospital. From the 10th of July to the close of the season, Sept. 6, 60,144 children were treated on the floating hospital. The daily average attendance was 1,273.

—The centennial of the Lying-in Hospital will be celebrated next year. The hospital was opened in a building on Cedar street in 1799. De Witt Clinton and Alexander Hamilton being among the founders.

—The commissioner of pensions gives as the total number of deaths during the war on the American side, 2,906, of which only 348 were killed in battle or died of wounds; the mortality from sickness being 2,558—a very large death rate.

—The late Dr. Pepper left an estate estimated to be worth $1,000,000, to be divided between the widow and three sons. He directed that his body should be cremated and his brain given to the American Anthropometric Society.

—To show the great power of common turpentine, a writer in the "Maine Journal of Medicine and Surgery adduces the alleged fact that "a pregnant woman needs only to remain fifteen minutes in a new painted room to produce an abortion."

—It is all very fine (*Medical Times and Hospital Gazette*) for successful consultants to preach transcendentalism to us, but the tendency of the age is against them. We have to deal with the public as we find it; and we find it, on the whole, ready to make all the use it can of us, and extremely unwilling to make any adequate return.

—Dr. Robin, of Paris, has obtained excellent results with fluoride of ammomium in the treatment of abnormal fermentation of the stomach. The drug acts upon lactic, acetic and butyric fermentation, not only by destroying the ferments but by modifying favorably the influence of the gastric juice on the digestion of albuminoid and the refuse.

—The old advice, "Be just before being generous," is very strictly applicable to our position. (*Medical Times and Hospital Gazette.*) Even the neediest of medical men, we believe, do an enormous amount of work for people scarcely less poor, and certainly—from their habitual surrounding—less necessitous than themselves. The fact is, that we have so long allowed the public to estimate the value of our work by the pecuniary equivalent demanded, that it has ended, as it was bound to do, by taking us, to a large extent, at our own valuation.

—A very simple procedure will remove moles without having recourse to the knife, says a correspondent. Shave a match or sliver to as fine a point as possible, dip in carbolic acid and lightly touch the mole, care being taken to prevent the acid touching any other portion of the skin. Apply this every three or four days and the mole will gradually disappear, leaving is space clean and healthy.

—The impression in the minds of the public generally is (*Medical Times and Hospital Gazette*) that we give freely of that which costs us nothing, and the sooner we proceed to disillusionize it, the better for both parties. If all paid us who can and ought to do so, we could very well afford to give all the gratuitous service required by those who really cannot afford to remunerate us pecuniarily—those from whom we must be, and are, contented with a meed of thanks. But of this condition we, *not they*, must be the judges.

—Dr. Anita Newcomb McGee, wife of Prof. W. J. McGee, head of the Bereau of Ethnology at Washington, and daughter of Prof. Simon Newcomb, former chief of the Naval Observatory, is the first woman ever appointed as an officer of the United States Army. She is entitled to the uniform of a second lieutenant. She has the entire charge of the examination and assignment to duty of all the female nurses of the U. S. Army. She was born in Washington, thirty years ago, and is a graduate of an Italian college and an English university.

—The Indiana Board of Health, according to the Lonsiville *Courier Journal*, will recommend in its forthcoming report that the custom of interring bodies be discontinued. Cremation is regarded as the only safeguard against the spread of disease that is frequently traced to cemeteries. It is claimed that the origin of diseases heretofore regarded as mysterious is due to the poisons in the earth. It is held that the earth is not a disinfector. Earthworms bring back to the surface from dead bodies germs of typhoid fever, consumption, lockjaw, yellow fever, etc.

—"The worth of anything," in the estimation of the vast majority of our fellow-countrymen (*Medical Times and Hospital Gazette*), "is just as much as it will bring," and this, in the mind of the average Englishman, is the test which he applies to the work of his medical attendant. No one is better aware than ourselves that professional relations may develop into friendly and social ones, but every medical man knows that the result of this is almost inevitably to lead to a re-consideration, in the direction of reduction, of his scale of fees as applied to any such case. He does not like to charge his friends so much as he does "outsiders."

—Why in the name of common sense (*Medical Times and Hospital Gazette*), when consideration is to be shown, should it always be the medical man who has to show it? The belief of the public that we are a disinterested profession, based upon the vast amount of work we do for nothing, would be all very well if we had ourselves no liabilities to meet, no creditors to satisfy. We should be the last to contend that no medical man should do any gratuitous work. But we assert, from years of personal experience and observation, that two-thirds of the work which is now done gratuitously constitutes simple robbery, and that our acquiescence in the continuance of such a state of things makes us, to that extent, the enemies of public and commercial morality.

—CRAIG COLONY PRIZE FOR ORIGINAL RESEARCH IN EPILEPSY.—The President of the Board of Managers of Craig Colony offers a prize of $100 for the best contribution to the pathology and treatment of epilepsy, originality being the main condition. The prize is open to universal competition, but all manuscripts must be submitted in English. All papers will be passed upon by a committee to consist of three members of the New York Neurological Society, and the award will be made at the annual meeting of the board of managers of Craig Colony, Oct. 10, 1899. Each essay must be accompanied by a sealed envelope containing the name and address of the author and bearing on the outside the motto or device which is inscribed upon the essay. The successful essay becomes the property of the Craig Colony, for publication in its annual medical report. Manuscripts should be sent to Dr. Frederick Peterson, 4 West Fiftieth street, New York city, on or before Sept. 1, 1899.

ORIGINAL ARTICLES.

THE CIRCULATION OF THE NERVOUS SYSTEM.

By Herman Gasser, M.D., Platteville, Wis.

Part I.

A GERM-CELL out of which is developed an insect, a fish, a bird, or a man, is as simple a cell, even though examined by the most experienced man with the aid of every means of scientific analysis, as is the epidermic cell, yet each germ-cell has a specific energy of its own, and even among the same species each has its individual characteristics in directing its development.

The simple germ-cell of the egg of a chicken, practically without shape or form, assimilates, along the organizing tendencies of its ancestors, the albumen with which it is surrounded and builds up a living organism of bones and muscles, feathers and nerves, the organizing tendency of which, when hatched, is no longer circumscribed by the egg-shell.

In this way, by the labors of a host of scientists, beginning with Von Baer, what we first imagined to be very complicated phenomena, upon their analysis into their simple constituents come readily within the mental grasp along the basic lines of general principles, and give us an orderly conception of the mechanism of the organizing material tendencies, or the unfolding of the ancestral memories, regularly and systematically, limited always in the absorption and assimilation of energy by its then state of existence.

"A chick which creeps out of its shell at once runs about, as did its mother when she, as a chick, broke her shell. Think how extraordinarily complicated are the motions and sensations of such acts! Or only consider the difficulty involved in the equipoising of its body in running, and it will be conceded that the supposition of an innate reproductive faculty alone can serve as an explanation of these intricate performances. Without hesitation it picks up the grains that are thrown to it. This implies that it sees them, and that it correctly judges their position and their distance; moreover, it has to move its head and other members with great precision.

"All of these things could not have been learned in the egg-shell; they were learned by the many thousands of beings which had lived before this chick, and of which it is the direct offspring. Such surprising performances of animals are generally called instincts; and some philosophers have indulged in mystic explanations of instincts.

"If instinct is regarded as the result of memory, or of the reproduction-faculty of organized matter, if we assume that also the race is endowed with memory, instinct *is* understood at once; and the physiologist is enabled to correlate and connect instinct with the great series of facts found to be phenomena of the reproductive faculty.

"Such a feeble irritation as the rays produce which proceed from the grain and fall upon the retina of the chicken, form the occasion of the reproduction of a complicated series of sensations, perceptions, and motions, which in this individual have never as yet been combined, and which, nevertheless, from the beginning were adjusted with accuracy and precision, as if the animal itself had practiced them thousands of times."—Hering.

The brain of an animal is from birth almost matured, while the scope for individual development in the case of the human brain is much larger, because a relatively greater part of its development is relegated to the time subsequent to birth. It grows under the influence of its surroundings, which affect its senses, and acquires, under such circumstances, in a more individual way, what the animal has received in the fixed formation of the race.

Movements are much more complicated and artificial; adaptation is no longer easy and instinctive, but is laboriously acquired. It demands the exercise of choice, repeated endeavor, effort, and at the beginning is accompanied by fatigue, but the end sought is to prevent diffusion by coordinating the movements into simultaneous groups or series.

In this way dexterity is acquired, and with sufficient limitation produces virtuosity, for nutrition builds along the lines of irritations, and so become the organic expression of the individual memory, that irritations similar in kind will discharge with greater ease, energy and rapidity, and eventually as instinctively as any well established series of reflex actions.

From this point of view "Home, Sweet Home," with the pure tone and harmony of modulation of a Patti that delights our senses, because all useless movements and overtones are eliminated, becomes an instinctive action, an organized memory, the history of which is the evolution of the past with the development of the present.

This organized memory is not alone in the brain, as is commonly believed, but also in the nerves, sensory and motor, and the muscles are trained; it is their memory or matter organized to discharge energy in a certain definite way, and are, hence, also susceptible of training.

This product of the unconscious memory of organized matter is the fundamental principle of the science of heredity; it is the history of the development of man, in common with every organic being in existence to-day; "the latest links of an immeasurable series of organic beings, of which one rose into existence from the other, and one inherited part of the acquired properties of the other."

To the beginner on the piano, how slowly he finds the single notes, with what difficulty he adjusts the muscles to find the keys, and then how marvelous the play of the virtuoso. With the swiftness of an instinct or reflex action each note finds an easy passage through the eye to the finger without waste, diffusion, or thought in their customary tracks.

All this is possible because only these practiced

irritations have become organized in the matter of, not only the brain, but the nerves and muscles. Such activities as these are not phantoms or photographs, stored away somewhere "within the soul;" indeed, they have no existence at all except in the material organization built up in the organism, whereby it is capable of reviving the same series of organized irritations, for "stored up knowledge is not a mental state, but a capability of being put into a mental state." —J. S. Mill.

It is the unconscious memory of the material organization. The first conscious experiences were possible only by virtue of a physical organization to receive them. They do not continue as images or experiences, but only as dispositions of the nervous substance that becomes better organized, and by virtue of which may be reproduced. To this unconscious memory or organization of the nervous system we owe all our ideas and perceptions; the oftener they are repeated the more perfect they become. What at first was acquired with difficulty, eventually is performed with ease. In this way, too, every germ passes through that "series of phases which were developed and fixed, step by step, in the memory of organized matter in the series of its ancestral beings, during a life of incalculable duration." This, again, is what we call heredity; the shortening of the process of growth and development by the adjustment of the forces in material organization, and so doing in a few moments what it took untold ages to accumulate. This is its organic history.

"A far-reaching memory, or reproductive faculty, we must assume is to be ascribed to the whole body, as well as particularly to the brain of a new-born man. By the help of this memory he is able to acquire the attainments which were developed in his ancestors some thousand times and are necessary for his life, much more quickly and easily. What appears as instinct in animals, in man appears in a freer form, as a predisposition.

"True ideas are not inborn in an infant, but the ability of ready and precise crystallization of ideas from a complex mixture of sensations is due, not to the labor of the child, but to the labor of innumerable ancestors.

"Theories of individual consciousness, according to which it is assumed that each human soul starts life from itself and commences a development of its own, as if thousands of generations before it had not been in existence, are in striking disagreement with the facts of daily experience."—"Hering on Memory," p. 25.

"Man," says Prof. Marsh, "cannot see, or hear, or smell, as well as many lower animals, but he can co-ordinate his impressions into more elaborate ideas than any other animal can create; hence all other creatures are at his mercy." At the expense of the better organized and specialized instincts he becomes sensible to a greater number of influences or sensations in the environment, in space and time, that cause the intellectual life to develop more slowly, for the matter of the brain is the latest development in the history of evolution, and the latest in organization.

Upon this general fact is founded the whole system of education and training, for "the distinctive work of a college," says Prof. Dwight, "is to develop thought-power in those who come to it for the education which it has to give."

"The mind (brain) is to be disciplined and developed in its own working powers," and after the same manner as the training of the blacksmith develops the working powers of his arm.

It is the education of the inherited faculties, predetermined and predisposed to respond to irritations by its inherited material organization.

In an organism, all the varied forms of life, even to the cells, are held together in one coherent unity, or consensus, by the nervous system, and every irritation is transfused and reechoed to its remotest parts. "Every part of the nervous system is every instant traversed by waves of molecular change, here strong, and here feeble. There is a universal reverberation of secondary waves, now arising in this place, now in that; and each nervous act thus helps to excite the general vital processes while it achieves some particular vital process."—Spencer, "Psychology," p. 96.

Through it is held together the whole complex and aggregated organism, and the sum of its activities we call its life, the very definition of which "is a continuous adjustment of inner with outer relations," and assumes the hypothesis of a circulating energy of the nervous system.

As the various internal functions of the organism, in common with the incitations of the outer world carried by the sensory nerves, act with varying rapidity and power, there necessarily must be equalizing and controlling centers, the adjustment of which gives rise to the state of conscious feeling.

If every sensation sent from the periphery and the internal organs were alike, of equal and regular wave-length and strength, there could be no equilibration of varying forms of nervous energy, and hence no states of conscious feeling.

If, as some hold, all irritations of the nervous fibers were similar in character, of equal wave-lengths, they would then, to produce differences of relations of feelings, have to be absorbed and adjusted in dissimilar form by the local special energies of the brain to produce consciousness.

The general scheme of the functions of the nervous system is an ingoing movement, a central elaboration, and an outgoing movement, in the circuit of which appear the phenomena of consciousness as a function of its circulating energy.

The auditory nerve receives the motions of vibrating matter, the optic nerve luminiferous vibrations, the nerves of the skin touch and temperature, that gradually unite and coalesce within the brain. The function of each is of a specific kind, by stimuli of all orders. An electric current through auditory nerve produces sound; through optic nerve, sensations of light; the gustatory nerve, taste.

No matter what the stimulus, a blow, a ray o light, or an electric current, it invariably manifests itself as sensations inherent in certain nerves. It is the condition of the substance o

the special nerves of sensation that causes a specific reaction. It is the co-ordination of the different sensations of varying rhythm in the cortical cells of the brain that gives rise to states of feeling and consciousness, and the study of the co-ordination of these activities becomes an analysis of the involved interaction of the cerebral function.

The theory of a circulating energy of the nervous system with the nerve-cell, or neuron of Waldeyer, as isolated anatomical units, is untenable. That there is a physiological connection between them all must admit.

The fact of continuity is of much greater value than the histological structure, as understood by the most improved methods of staining, especially so when it is not in harmony with well-established phenomena, and you must appeal to the imagination to fill in the gap.

In the latest anatomical analysis by F. Apathy, there is a return to the older conception of nerve-fibers entering ganglionic cells, and with it a return to the philosophic unity and harmony between anatomy, physiology, and biology.

The continuous activity of the heart, lungs, and muscles of respiration, to maintain the organism in equilibrium must constantly receive the multitudinous impulses from every portion of the body, with a concentration of the circulating nervous energy.

This we find to be demonstrated by experiment. If one has ever witnessed the simultaneous division of the vagi in a dog, he was startled by the amount of energy that was drafted off and that they held in check. The effect is similar to that of cutting an important artery. "We know from daily experience," says Foster, "of all the psychical nervous centers the respiratory center is the one which is most frequently and most deeply affected by nervous impulses from various quarters."

But not only the respiratory muscles and the heart are held in this sustained tonic activity by the nervous energy, but all the muscles of the body. They are never in a state of absolute rest. The positive activity of the one side is negatived by the activity on the other side and keeps them in tonic contraction. They are balanced by the equilibrating forces of the nervous energy.

That the condition of the blood has a great influence upon respiration and the action of the heart is also familiar.

As the blood becomes more venous the sustaining and equilibrating centers become relaxed, and the respiratory and heart-function become more vehement, until at times they bring into play almost every muscle of the body. These have been called the inhibitory centers, and have become a stumbling-block in physiological interpretation.

If the circulation of the nervous system with specific energies of its local functions is true, then the carbonic acid becomes a stimulant of heart and lungs, and oxygen a sedative, and in this way the circulating energy of the entire organism brings about the self-regulating action of the heart and lungs, so that the more mechanical expansion of the lungs transmits along the vagus an impulse to the respiratory center that the oxidation is sufficient, when it eases up and brings about an expiration to draft off carbonic acid.

In this way the respiratory mechanism is brought into close communion with every part of the body. "We should accordingly expect to find that the vaso-motor nerves were connected with, and arterial tone regulated by, the central nervous system, in order that the caliber of the arteries of, and the supply of the blood sent to this or that vascular area might be varied according to the varying needs of the economy. And experience proves this to be the case."

Increased blood-pressure stimulates the cardio-inhibitory center in the medulla, and brings about a slowing of the heart-beat, while section of the vagus or decreased blood-pressure augments its action. If we keep in mind the fact that the inhibitory centers are continuously swinging between the constructive and destructive forces of the organism to maintain its equilibrium, then the destructive forces of carbonization means their stimulation to increased activity, while oxidation means their cessation of action by the increased forces of control.

If the circulating energy of the nervous system has the power to contract a muscle, it also has the power to inhibit it. This we find not only to be daily experience, but demonstrated by experiment.

In the co-ordination of nervous energy, the arrangement is such that, when abnormally active and its chief centers surcharged with blood, they arrest or inhibit the organ which propels it, by their organized restraining influence of reflex action to create equilibrium; otherwise we would not exist.

This is true not only of simple reflex action and inhibition, but it is equally true of those muscular actions by which we impart ideas, for they too can at any moment be inhibited.

I will to move, or I will to stop moving, have the seat of their actions in the same elements, and are located principally in the frontal lobes of the brain. The difference between the simple reflex action and the highest form of intelligence is one of degree only of the development of the nervous system and its higher ganglia, and the physiological and the moral power of control is dependent on their size and quality.

They are the centers of inhibition. It is there the multitudinous sensations of varying forms and strengths are elaborated into one general unity, and in which the systematic and cultured co-ordination is the measure of the intellectual operations.

This again suggests the conclusion that moral conduct is more dependent upon the size of frontal lobes, and the influences of the forces by which they have become organized, than to the irregular conformation of face and skull.

We can observe how a ray of light or a wave of sound is transformed into an irritation or increased stimulation of the nerve-fibers and conducted to the brain-cells, but here we lose all trace of it in the labyrinthian connections of the infinitely involved processes.

Here emotions, thoughts, conceptions, and volitions arise out of the sensations sent to it. Here we are at once transposed into the field of psychology, and between it and physiology we find there is an inter-connected material process accompanying conscious existence.

On the other side of its transit through the brain we see the volitional efforts of the limbs and hear the spoken words.

Thus we find an inalterable order along the lines of fixed laws connecting the conscious life with the functions of the body. It cannot be that the sensations, after having arrived in the brain, become immaterial states of existence, to be again drafted off on the motor side of the nervous system as material functions.

The chemist and physicist may analyze the elementary matter, formulate into a systematic series of molecular and atomic structure that is ever changing in form, but unchanging in quantity, yet its ultimate composition transcends all his knowledge. We may call it "material" or "spiritual;" it matters little, for the one, as well as the other, is as much an enigma; unknowable forms of existence, "figments of the imagination embodied in words of learned sound but little meaning," valuable only as a weapon to frighten and anathematize the ignorant, weak, and credulous.

Our passions and hopes, ever ambitous to fly the bounds of ordinary experience, may cause sublime and delightful states of feeling and aspiration, but as legitimate subjects for scientific speculation must be regarded with the same impartiality as the other natural mental phenomena, for as Kant says: "In those matters which concern all men alike nature is not guilty of distributing her gifts with partiality; and that the highest philosophy, in dealing with the most important concerns of humanity, is able to take us no further than the guidance which she affords to the commonest understanding."

INFLAMMATION.

By E. Franklin Smith, M.D., New York.

DEFINITION.—Inflammation may be defined as "the succession of changes which takes place in a living tissue as the result of some kind of injury, provided that this injury be insufficient immediately to destroy its vitality."—Sanderson.

The Phenomena of Inflammation.

1. Changes in the blood-vessels and circulation.
2. Exudation of fluid and of blood-corpuscles from the vessels.
3. Changes in the inflamed tissues.

I. Changes in the Blood-vessels and Circulation May Be Thus Summarized.

1. Dilatations of small arteries, then veins, and lastly capillaries.
2. Acceleration of blood-current, quickly followed by gradually increasing
3. Retardation of blood-current—first observed in veins—and simultaneously with this
4. Leucocytes in large numbers fall into peri-axial stream and lag behind.
5. Pulsation in smallest arteries, oscillation of blood-stream, and perhaps stasis.
6. Thrombosis or coagulation may take place, but only when the capillary walls are dead.

II. Exudation of Fluid and of Blood-Corpuscles from the Vessels.

Upon an inflamed surface collects fluid and small round cells. A coagulum, false membrane, forms, consisting of fibrin, small round cells, and some red blood-corpuscles.

(a) Source of the new cells.

Leucocytes come from the blood vessels, their passage being due to their power of amaboid movement.

Red corpuscles come also from the blood vessels.

Small round cells, theories as to their origin advanced are:

Virchow: From multiplication of connective tissue corpuscles.

Cohnheim: That they were escaped white corpuscles.

(b) Exudation of fluid.

The composition of inflammatory effusion is not constant. In more acute inflammation it contains a large number of red corpuscles; in less severe forms the white corpuscles are in excess. In more severe inflammation the fluid approaches plasma in its composition and tendencies, while in the less severe it becomes very like the fluid in mechanical hyperaemia. Lymph differs from liquor sanguinis in containing less albumin and having a slighter tendency to coagulate.

III. Changes in the Inflamed Tissues.

They are soft and the component tissues are indistinguishable. The tissue elements are separated by fluid and obscured by leucocytes and fibrin-filaments. Regenerative processes are sometimes observed in the cells of an inflamed area.

The Terminations of Inflammation.

1. Resolution.—This means a complete restoration of the parts to their normal condition; the walls of the blood-vessels gradually recover, the stasis passes off, and the circulation becomes re established. The exuded materials are reabsorbed.

2. Gangrene.—This is due to violent inflammation where stasis occurs over a large area; when the inflammation comes to a standstill this area does not recover.

3. Production of Granulation Tissue.—This occurs when the inflammation has continued, with destruction of original tissue, and the formation of new tissue, or granulation tissue. This tissue is composed of a mass of round cells containing embryonic blood-vessels; if the inflammation has lasted any length of time these cells have a tendency to become elongated and develop into fibrous tissue. These cells are supposed to develop either from (a) proliferation of the fixed connective tissue corpuscles in the part; (b) proliferation of the wandering plasma cells.

When the inflammation has passed on to the stage of complete destruction of the tissue and the formation of granulation tissue, the following things may happen: (a) Organization of the granulation cells into more completely formed fibrous tissue; *i. e.*, fibrous cicatrix. (b) The cause of the inflammation continuing to act, but not with the same violence, we have a condition of chronic inflammation. (c) As a series of acute changes, suppuration. (d) Inflammation affecting a free surface, ulceration.

THE CAUSES OF ACUTE INFLAMMATION.

Predisposing.—Those which lower the general vigor, weaken the tissues, injure the blood, or lower nutritive activities. (These will be considered more in detail in treating of suppuration.)

Exciting.—1. Traumatic, as blows, mechanical irritation, etc.

2. Chemical, as insect stings, ivy poisoning, etc.

3. Thermal, such as heat and cold.

4. Electrical; here the electricity must be applied long enough to produce anaemia and consequent privation of blood.

5. Specific, as for micro-organisms (erysipelas, etc.)

SYMPTOMS OF ACUTE INFLAMMATION.

Local Symptoms.—1. Redness, due to excessive amount of arterial blood to the part; discoloration is also due to pigmentation of the tissues, resulting from the disintegration of red blood-cells in the tissues, and deposit of blood pigment there.

2. Heat, due to increased quantity of blood in the part, and increased cellular activity.

3. Swelling, due to solid material deposited in the tissues, and the presence of serous fluid.

4. Pain, due to pressure of distended blood-vessels on the nerves, these nerves themselves probably being the seat of inflammatory changes.

5. Impaired function, due to the fact that every inflamed tissue is injured.

In the sthenic form of inflammatory fever, headache, suffused eyes, loss of appetite, furred tongue, constipation, scanty and high colored urine, dry skin. Temperature, at first, about 103 degrees; when suppuration occurs, it begins to fall or oscillates. The pulse, 100 to 108, full, regular and not compressible. Delirium if fever be high.

In the asthenic form, temperature higher; sometimes oscillating; pulse soft, thready, compressible, from 120 to 150; the tongue brown and dry; delirium of a muttering type; patient semi-conscious.

TREATMENT OF ACUTE INFLAMMATION.

Local Treatment.—Ascertain and remove the cause. Practically, the active cause at work is the growth of micro-organisms in the tissues; therefore we should endeavor to:

(a) Render the growth of these organisms difficult; (b) minimize the effects they produce, and (c) modify symptoms that are sources of danger and discomfort.

Diminish the congestion which causes the pain and amount of exudation, by

1. Elevation, to favor return of blood to heart and lessen venous engorgement.

2. Give aconite, to reduce rapidity of heart's action.

3. Blood-letting, to diminish local congestion. In general blood-letting, the blood-serum is altered in a direction antagonistic to the life of the micro-organisms, and thus the growth of the causal agents may be interfered with. Local blood-letting may be done by (a) Leeching. A leech will usually take about one drachm and a half; when it is filled it usually drops off. After-bleeding from leech bites is caused by a peptone, secreted by the leech, which prevents coagulation. A little salt and water will cause the leech to drop off. (b) Cupping. This may be either wet or dry. (c) Scarification, to permit exuded materials to escape. (d) Incisions. Useful where deep tissues are seat of trouble, as the periosteum. (e) Puncture. Especially useful in relieving tension, as in epididymitis.

4. Cold, to contract blood-vessels. Only use in early stages; in later stages it is apt to precipitate gangrene. In the form of an evaporating lotion, the following may be applied:

℞. Ammonii chloridi..... ʒss
Spts. vini rect..... ʒi
Aquæ..... ʒviii

M. Sig. Apply to the part by means of a rag, kept constantly wet with this lotion.—W. Watson Cheyne.

Dry cold may be applied by means of an India-rubber ice-bag, or by means of Leiter's tubes; the latter should not be left on longer than two hours at a time, on account of the great depression of the vitality which results.

5. Heat, lessening the irritability of the nerves of the skin, which action may be communicated to the deeper nerves, leading to a diminution in the calibre of the afferent arteries. Heat may be applied by means of poultices or fomentations. Impregnate poultices with eucalyptus oil or boracic acid, especially when the part has been incised. Change every two or three hours. A disadvantage in using hot fomentations is the necessity for frequent changing.

GENERAL TREATMENT.

Indications are to (a) keep up the strength of the patient; (b) dilute the poison in the blood; (c) lead to the excretion of the poison from the blood; (d) treat any special symptoms that may arise.

Under (a) give milk and the fluid preparations of meat; of milk, he should be given four to six pints daily.

Under (b) allow the patient to drink large quantities of fluid, which, too, should be as nutritious as possible, such as milk, barley-water, weak beef tea, etc. A good drink is the "Imperial" drink, composed of a drachm of cream of tartar, with a little sugar and a little lemon peel to the pint of boiling water.

Under (c) administer purgatives, especially sulphate of magnesia; diuretics, especially bitartrate of potash; sudorifics, such as liquor ammoniae acetatis, or Dover's powder.

THE CAUSES OF CHRONIC INFLAMMATION.

The most common cause is the presence of an infective disease, more especially tubercle or syphilis. Presence of a foreign body in a part, the retention of pus after opening an abscess, the obstruction to a duct of a secreting gland, certain conditions of the blood, as in gout, all are causative factors.

THE PROCESSES OF CHRONIC INFLAMMATION.

They are the same in their essence as those which occur in acute inflammation, except that they progress more slowly, and extend over a longer period. These processes consist in gradual destruction of tissue and its replacement by young connective tissue.

THE SYMPTOMS OF CHRONIC INFLAMMATION.

Constitutional, none *per se*, unless it attacks some vital organ. Those symptoms present are usually due to the morbid process which sets up the inflammatory condition.

Local.—The most marked is the swelling of the part, especially noted in inflammation of periosteum and bone. The pain varies according to the seat of the trouble; in bone, it is aching, and worse at night; in the breast, it is neuralgic. There is also increased heat and vascularity, with but little redness.

TREATMENT OF CHRONIC INFLAMMATION.

1. Get rid of the irritating cause.

2. Rest, especially in bed, particularly if the part affected is the lower part of the body or the lower extremities.

3. Counter-irritants. The action of counter-irritants is by no means clear, but the theory most generally received is that, on the one hand, by causing congestion and inflammation of the skin, they lead reflexly to diminution in the vascularity of the inflamed part; and, on the other hand, by the irritation of the terminal nerves in the skin, they alter the nervous balance, and lead to some salutary change in the innervation of the diseased part.

The mildest counter-irritant is a poultice, seldom efficacious. In order of efficiency the counter-irritants most employed are (1) actual cautery, (2) blisters and (3) iodine.

In blistering the skin, place the blister a little away from the inflamed area, but over the area of nerves which are in direct relation to the part; this acts by increasing the activity of the vascular and lymphatic circulation through the thickened tissues and so aids in their absorption. Leave a blister on for ten hours; its action may be increased by placing a poultice over the part. In chronic inflammation blisters should be repeated three or four times before one should be satisfied that no good is resulting; make an interval of one week between applications.

In deep seated inflammation the actual cautery is of great service. Use the white-heat, and pass over lightly two or three times. After the application of the cautery, poultices should be applied until the resulting slough has separated. After the eschar has separated the sore should be prevented from healing for from four to six weeks, using savin ointment for this purpose.

4. Free incisions into the inflamed part, especially when the periosteum or bone is involved. Do not use if the inflammation is dependent upon specific diseases, such as tubercle or syphilis.

5. Pressure, especially applicable where the inflammatory process has passed off and we have to do chiefly with the residual thickening of the tissues. Regulate it carefully. Best applied by elastic pressure through a mass of cotton-wool.

6. Massage, used with a view of getting rid of the products of inflammation, but not judicious to use when the actual process is going on. The following methods are used:

(a) Effleurage, or light rubbing of the part. It increases the lymphatic circulation simply. Rub towards the trunk. (b) Friction massage, breaking up the material by rapidly rubbing the part with one hand, while with the other the broken-up inflammatory materials are steadily pressed upward along the lymphatic vessels. (c) Petrissage, or kneading the thickened parts, especially valuable where there are adhesions. (d) Tapotement, or tapping the thickened tissues with the fingers; follow by kneading and effleurage.

RHEUMATIC FEVER AND ITS TREATMENT.

BY ROBERT G. CHASE, M.D., PHILADELPHIA.

THE term "rheumatism" should be restricted to the condition described usually under the head of "rheumatic fever," and the adjective "rheumatic" should only be applied to processes or conditions pertaining to this particular disease. Other terms, such as "gonorrheal rheumatism," etc., are only misleading, and such conditions should be renamed according to their cause. The French authorities speak of a "rheumatic diathesis"; this term has probably been one cause of the vague notions in regard to rheumatism, although there are people undoubtedly who seem to have a tendency to the involvements of joints.

The heart may be affected in even the mildest cases of the disease; in fact, it is more liable to suffer during mild or sub-acute cases than in the more severe. It is at the same time difficult to say whether this is absolutely or only relatively true. We do not know whether the weight of the disease falls more on the heart because it is less severe in the joints, or whether because of the mildness of the attack patients work more and thus help cause more frequent heart lesions. However this may be, the heart is fully as liable to be involved in mild cases and frequently seems more apt to be. There are probably cases of endo- and pericarditis, the result of rheumatic fever, in which the poison attacks these tissues and not the joints. The affection of these membranes is not to be regarded as a complication of the disease, but as an essential part of it. True, they are not present in all cases, but they are not more of a complication than is the involvement of the joints.

Rheumatic pleurisy is rare, and is usually an extension of pericarditis, but may be primary. The same is true of the peritoneum, only its in-

volvement is still graver. The better view is that there is a specific toxin circulating in the blood during rheumatic fever and that this is apt to involve the serous membranes, most commonly those of the joints, next those of the heart, then the pleura, peritoneum, meninges, etc. From this view there may be cases in which the virulence of the disease may be spent upon the heart instead of the joints.

The hereditary transmission of this disease has been called into question. Cases have been collected which show a predisposition to the affection, especially on the mother's side. I will not insist too strenuously on this being a fact, but believe there is a strong tendency to this condition in certain families.

As in the case of syphilis and malaria, we now possess specific remedies for rheumatic fever in salicylic acid and the salicylates. This statement is made from the clinical standpoint of their effects. They do not in all cases give definite results or cures, as do quinine in malaria or mercury and the iodides in syphilis, but decided effects generally follow their administration. Some even go so far as to say that failure of salicylic acid or its compounds in a supposed case of rheumatic fever throws some doubt on the correctness of the diagnosis. The drug has but little effect on non-articular involvement from other causes or on rheumatoid arthritis. Salicylic acid, salicylate of sodium or methyl salicylate may be given every two or three hours until the symptoms, local and constitutional, ameliorate, when the amount may be somewhat reduced and the treatment kept up for ten days after the modification of the symptoms occurs.

As to the mixed treatment: I sometimes give fifteen grains of salicylic acid and a like amount of sodium bicarbonate every two or three hours until the acidity of the urine is markedly lessened, and then giving up the latter continue the use of the former drug. It is thought by some that the liability to cardiac involvement is lessened by the use of the mixed treatment, but I am not in a position to say that this is the case.

Other remedies are given for their analgesic effect, as antipyrine, phenacetine, etc. Again, the bromides are in favor, particularly ammonium bromide. Undoubtedly analgesics relieve the suffering of the patient to some extent, but none reduce the length of the attack as do the salicylates. Prior to their use opium or its derivatives was largely used, and considering the length of the disease, the exquisite suffering of the patient, etc., it had, and still has, much to recommend its use. It is often employed now when the salicylates fail to have their best effect. The different preparations may be used at intervals, in order that the patient's system be not accustomed to one form of the drug.

The diet should be light ordinary fever diet and not particularly pushed. Although there is a tendency to anemia, loss of weight, and profound asthenia in patients suffering with rheumatic fever, it is yet a benign disease, and the above conditions are not especially grave.

Rest follows perforce except in mild cases, but there are cases in which absolute rest is not imperative and the patient follows his vocation. But in these cases there is the greatest danger to the heart.

In hospital work it is found that in taking the clinical history of patients with heart disease, there is often no history of rheumatism given. Close questioning, however, elicits the fact in many cases at times they have had joint pains but continued work. This may have happened even four or five times, but the attention of the patient was scarcely attracted to the fact until definitely asked about such attacks. These facts often lead to the conclusion that heart disease has had its origin in rheumatic fever not severe enough to cause disability or even to call it particularly to the attention of the patient.

As to the local treatment of rheumatic fever I have but little to say. Many methods have been used, as the application of ichthyol, iodine, etc., but I have never been led to believe that these exert any influence for good. The fugitive nature of the disease easily misleads one as to the effect of the material used, one joint becoming well and others being implicated, whether the application of remedies be made or not. Rest is of the greatest importance in saving pain. Another expedient that saves suffering of the patient is the enveloping of affected joints in some material to lessen friction of clothing, etc., and also to guard against the effect of changes of weather. I prefer carded wool, as it does not become so foul and does not kink so easily as does cotton. The joints should be lightly enveloped with this material, to some distance also above and below the joint, and fastened with some wrapping thread. Applied in this way it remains elastic, and is easy to remove when examining the joint.

If the arthritis settles in a particular joint, as the knee or elbow or wrist, with more marked severity, the suffering will be greatly alleviated by putting the member on a splint and a light plaster of paris dressing applied. In local treatment, then, rest and protection are the main points, very little good being done by the use of ungents.

The treatment of rheumatic hyperpyrexia should be that of hyperpyrexia in general. The salicylates are without effect and they should not be used, or especially not in large doses. Alcohol and other stimulants should be used, and external antipyresis in the shape of the cold pack or even the gradually cooled bath may be employed, but I speak hesitatingly of the effect of any method of treatment in these cases.

In regard to pleural effusions occurring during the progress of the disease it is thought that resorption is aided by the salicylates. For this reason they are not to be promptly evacuated, and clinical experience also justifies waiting longer. When pressure phenomena appear or are marked there shoud be no hesitation in withdrawing the fluid. As a sequel there is sometimes a persistent stiffness of some joints after the fever has subsided. This, together with a certain degree of atrophy of the muscles supplying the joint, is not essentially the result of the disease in itself, but may be rather secondary, as a result of pro-

cesses set up by the disease in regard to nutrition. Inunctions of oil of wintergreen, massage, passive motion, and the Faradic current, should be used in these cases.

If cardiac complications develop, change from the salicylates to the alkalines. I advise against a blister over the heart and prefer the application of an ice bag. The use of a blister may be of value, but it adds greatly to the discomfort of the patient. If it is applied, then a flying blister is best, or a light stroke with the Paquelin cautery may well take the place of the blister.

THE TREATMENT OF CHRONIC HEART DISEASES BY BATHS AND EXERCISE.*

By H. V. Barclay, M.D., New York.

AMONG the great advancements of medical therapeutics made in recent years, few have attracted such general attention as the improved treatment of chronic heart diseases, as applied at Nauheim, in Germany. Nauheim has suddenly become famous, and is now the center where sufferers from chronic heart disease go in steadily increasing numbers in search of relief. According to statistics the number of patients visiting Nauheim amounted in 1895 to no less than 12,000, a large proportion of whom were heart cases. The medical fraternity all over the world seems to have been aroused by the numerous reports of wonderful "cures" there effected; physicians from all parts have gone there to investigate, and the subject has been thoroughly discussed, both in medical societies and journals. This extraordinary interest has in part been due to the fact that the new treatment seemed to upset some of the old established rules for the treatment of these cases, particularly as to exercise. This is only apparently so, as will be shown later. There may have been exaggeration as to results, as is generally the case when some new treatment is "sprung upon" the public, but aside from this the fact remains that the Nauheim treatment has come to stay, and is beyond all doubt a very great improvement upon former methods.

But here comes the curious fact that the Nauheim treatment in reality is not new, but simply the combination of two old methods, each, however, but little known to the world at large, but highly valued where they were in vogue, viz.: Medical gymnastics with massage, and carbonated brine baths. The home of modern medical gymnastics is, as you are all well aware, at the Royal Central Institute of Stockholm, and at this place and also in other parts of Sweden chronic heart disease has been treated by gymnastics with marked success for more than a quarter of a century. This is equally true as to the carbonic brine baths at Nauheim, as shown by Beneke, physician to the baths between 1857 and 1866, in several articles, the most important of which appeared in 1872, since which time patients with heart disease have been going to Nauheim for treatment. Later August Schott published a very important and exhaustive article on the Nauheim baths and their peculiar action on chronic heart disease. It was, however, not until he adopted the Swedish medical gymnastics as an adjuvant to the treatment by baths that the brilliant results later recorded took place, and thus it is that the combined systematic application of baths and gymnastics is now often referred to as the Schott method. The Schott method has been minutely described in the book on the Nauheim treatment by the English physician, Bezly Thorne. To Heinemann, of New York, belongs the credit of having introduced it in this country.

In describing the treatment let me begin with the baths. The baths at Nauheim consist of a number of natural springs spouting forth from the ground as a white foaming liquid, the two principal ones being the Grosser Sprudel and the Friedrich Wilhelm's Quelle. The waters contain different salts in solution, the chief ones being chloride of sodium, chloride of calcium, some iron, various earthy constituents, which latter, however, have no value in the treatment, and a large amount of free carbonic acid gas. The baths are administered in ordinary wooden tubs, these being found to withstand the chemical action of the waters better than tubs made of other material; otherwise they are of no advantage. A course of baths usually comprises twenty-one to twenty-five, and they cover a period of four to five weeks, intermission being made in the beginning every third day and later every fourth or fifth day. The baths are systematically regulated as to strength and temperature, as well as to the time the patient is to remain in the water. At first is ordered what is termed the thermal Sool Bad, which consists merely of the water after the carbonic acid gas has been allowed to escape and some of the salts, iron, and earthy matters have been allowed to precipitate. It is even sometimes diluted by adding ordinary water. By degrees the waters are made stronger until the baths are taken at full strength, containing all the natural carbonic acid gas ("Sprudel Bad"). The carbonic acid gas in the water is however a very unstable quantity, and after it is once in the tub the greater portion of it will soon disappear. In order therefore be able to give a still stronger bath and which will contain the full quantity of carbonic acid gas during the whole of the bath, the "Strom Bad" has been devised. In this bath the water as it comes from the Sprudel Springs is made to flow through the tub in a constant stream, so that the patient is continuously exposed to the full action of the water. Another device to add to the strength and quality of the bath is the addition of one to three litres of Mutterlauge,* or mother lye, which is the uncrystallizable liquid left over in the manufacture of salts at the Nauheim salt works. As to duration of the bath this is at first six to eight minutes, but is gradually lengthened up to fifteen minutes towards the end of the course. The temperature,

* A paper read before the New York Medical Gymnastic and Massage Society.

* This is particularly rich in chloride of calcium, which is very irritating to the skin; hence its effect.

which in the beginning usually is 92 degrees to 95 degrees Fahr., is gradually lowered towards 88.8 degrees Fahr., the natural temperature of the waters. The effect of the bath on the patient is watched closely by trained attendants, and the baths are modified according to the requirements of each case.

Now, as to the physiological action of the baths: The first effect is a slightly chilly sensation. This, however, is only of momentary duration, and the patient soon feels a sensation of warmth and comfort pass through his body. The pulse shows marked improvement, both as to quality and frequency. It is generally described as becoming stronger, fuller, steadier, and slower, while the heart sounds become more distinct. The respiration is easier and slower, and a slight sensation of drowsiness takes possession of the patient. The skin shows marked redness, from which fact we may judge that the capillaries of the skin are dilated and allow a freer flow of arterial blood through them. The effect lasts for a good while after each bath, and as the days go by a marked improvement in the beat of the heart is observed; all unpleasant symptoms of pain, uneasiness, dyspnoea, etc., become less and less, while the general strength is much improved. This improvement is observed to continue for a long time after the end of the course.

There has been much discussion in explanation of the action of the baths and as to the relative value of the different constituents. By experiment it has been proven, according to Heinemann, that a plain bath of this temperature has beneficial action; that a salt bath will act still better, but that a salt carbonated bath will act best of all. All appear to agree, however, that the chief effect is to be ascribed to the action of the carbonic acid gas. Now what is this action and that of the other constituents? It may be mentioned that at first it was believed by Schott and others that an actual absorption took place, but there is no foundation for this belief and it is now abandoned. The chief action appears to be one of stimulation, in which the warm water and other constituents all take part, and although possibly different in kind is chiefly one of degree. The skin contains, as we know, the terminal branches of the sensory nerves, and through impressions made on these the cardiac and vasomotor centers are reflexly stimulated. The heart contracts more powerfully, the arteries are more rapidly filled with blood, while the capillaries of the skin become dilated and thus peripheral resistance is lessened. Internal venous congestion in turn is relieved, the circulation through the lungs quickened and oxygenation of the blood increased. The metabolism of the tissues is promoted, the general nutrition markedly increased and that of the heart in particular. By careful percussion and X-ray photography, as well as by change in the position of apex beat, it has been shown that in cases of dilated heart an unmistakable contraction of the heart takes place, and to this fact may be due the diminution, and in a few reported cases the total discontinuance, of abnormal heart sounds.

So much for the baths. Now as to the exercises. That exercise may be of benefit to patients with chronic heart disease was years ago demonstrated by Oertel in his "terrain cur." This is, however, to many patients a rather severe form of exercise, and a certain amount of strength is required to be able to undertake it and benefit by it. Not so with the Swedish medical gymnastics, by which we are able to minister to the very weakest of cases, as I shall have occasion to show.

The exercises and their technical execution are so familiar that any description is entirely unnecessary. I shall, therefore, proceed at once to examine into the exercises as applied by the late August Schott and his brother, Theodore Schott, who, as we have learned, introduced Swedish medical gymnastics at Nauheim, and who, we have been informed, have made many and important improvements, both as to the technique and selection of the exercises. A detailed description of Schott's exercises occurs as before mentioned, in Bezly Thorne's book, and having never seen it refuted by Schott, and moreover having had it attested by both physicians and patients who have visited Nauheim, I must be allowed to use it as a basis for such examination. According to it I find that Schott almost exclusively uses the "standing" position. But the "sitting" and "lying" positions are much preferable in the majority of instances, particularly in advanced cases; because these positions eliminate the effort which is required to keep the body erect and thereby make it possible for the patient to execute the gymnastic exercises with less danger, more energy and consequently with more benefit. Next, he avails himself very little of what we in gymnastic language call "support." The great advantage of it, both for the easy performance of the exercises and on account of the exactness and completeness it gives to them, is well known. Each exercise is executed once only, but the series of exercises may in the case of stronger patients be gone over again. This may perhaps be considered an improvement; at any rate it is the safer way, when the operator is without medical education or of insufficient training, or is a person who cannot at all times be depended upon in his work or judgment of the patient's condition. The great danger of overdoing an exercise is minimized, but this is the only advantage. The effort or exertion required in the execution of an exercise is not determined alone by the number of times it is to be repeated, but equally well by the resistance to be overcome, and the speed at which it is to be performed. Speed and resistance may be so adjusted that one movement may require more effort than the same repeated three times; but supposing they were so adjusted as to make the effort the same in both instances I am sure it would be to the patient's benefit to perform it three times instead of once. Anyone who is familiar with resisted movements, and who has tried the methods of only one movement, knows how unsatisfactory it is both to patient and operator. The patient hardly realizes that he has done anything before it is all

over. Respiratory exercises, which in heart diseases are of first importance, do not appear on his list, so far as I have been able to learn. The same is the case with massage, the value of which cannot be over-estimated. But I shall return to this later.

By analyzing Schott's exercises separately I find some of them open to serious objections. For instance, he recommends resistance to be applied, when the stretched arms are brought forward from the laterally extended position; likewise when they are brought down from the vertically upwards extended position. These movements, if resisted, act in such a way as to constrict and bind the chest, making respiration difficult.

It appears thus that the Schott exercises comprise only a small part of the Swedish system, viz., the active resisted exercises, performed in the standing position; further that the so called improvements are *nil* and that his method suffers from serious shortcomings and actual faults.

Schott has also, according to Bezly Thorne, invented a system of self-resisted exercises (*Selbst-hemmungs Gymnastik*), in which the patient is supposed to resist the exercise himself by partially contracting the antagonistic muscles. These exercises are in my opinion worthless; they are unnatural, and interfere much with natural respiration and are not devoid of danger.

But this is Schott. Other Nauheim physicians, like Heinemann, in all probability use the ordinary Swedish gymnastics and massage. Groedel, of Nauheim, by the way, speaks highly in favor of Zander gymnastics,* which as we know, is nothing else than Swedish gymnastics operated in a mechanical manner. The exercise treatment at Nauheim is therefore not exclusively the Schott treatment.

The physiological effect of gymnastic treatment is similar to that of the baths. I shall, therefore, go over it very briefly. The heart slows up, the volume of the pulse increases, it becomes steadier; capillary and peripheral circulation is much improved. The heart shows marked improvement as to position, size and apex beat; abnormal sounds diminish, while the normal improve in quality. Respiration likewise becomes slower and easier, unpleasant symptoms of dyspnoea, pain and uneasiness are lessened or entirely disappear; at the same time the patient is much improved in general health. But while this excellent result is obtained in the baths by their stimulating influence on the sensory nerves, it is obtained in the gymnastic treatment in a direct mechanical way and by its influence on both motor and sensory nerves. From our studies in physiology we know that when a muscle contracts it empties itself of blood; when it again relaxes, the heart sends in a new supply of arterial blood. Thus in the action of each of our muscles we have a power auxiliary to the heart, the importance of which we can hardly over-estimate, when we consider that the greater portion of our bodies consists of muscles, and further that it is here, in the capillary circulation, that the resistance to the blood current is the greatest. And it is this circumstance we take advantage of in applying gymnastic treatment for heart disease. The action is, however, more than a purely mechanical one, for the circulation is not alone stimulated in a ratio that is in direct proportion to the amount of blood moved forward by the exercise, but in a ratio many times greater, and although the muscle exercised gets the direct and special benefit, the whole body also takes part of it, and the explanation of it is the reflex stimulation transmitted to cardiac and vaso-motor centers.

Before going further it may be of service to consider certain points in the influence of training or exercise on the muscles. The blacksmith's arm is a familiar example of the strength-giving influence of his heavy work; another is the increase in strength obtained by athletes through systematic training. We know, however, that it is impossible for the blacksmith or the athlete, or anyone, to strengthen himself indefinitely. There comes a point beyond which we cannot go, and if training is increased after this point has been reached, we find, that instead of growing stronger we lose in strength. The heart muscle is no exception. If it has increased work to perform, no matter from what cause, be it from resistance to the circulation, as in cirrhosis of the liver and kidney, and in arterio-sclerosis, or on account of disease of its valves, it will increase in strength up to a certain point and become hypertrophied; but having its work increased beyond this point it will lose, become dilated and grow steadily weaker. What the heart needs then is relief, and this holds good in cases of hypertrophy as well as in cases of weak hearts, since the cause of hypertrophy is that the heart has increased work to perform. The problem is now, How are we going to furnish this relief by way of exercise, since exercises may also stimulate the heart to such an extent as to overwork it. The answer is already given; exercise within the limit and in such a way as to act upon as large portion of the body as possible. This is done, as already intimated, by exercising only one group of muscles at a time, in a position, at a speed, against a resistance suitable to the case and allowing a due interval of rest between each exercise. There is, however, one class of exercises which is of special importance, and that is the respiratory class. These movements serve, as you know, a double purpose, first of pumping the air in and out of the lungs; secondly, they assist materially in drawing the venous blood back to the heart and aid the circulation in the lungs. They are, therefore, of great service in improving the oxygenation of the blood and in relieving venous congestion. Respiratory movements are easy to perform, some being entirely passive, and may thus be applied to the very weakest, and each prescription of exercises should contain several of them.

The effect of passive movements is chiefly a mechanical one; the muscle is passively shortened and lengthened, and the blood thereby driven forward. The physiological action is much

*A Zander institute has been in operation at Nauheim for several years.

less than that of active movements, but there is no fatigue produced, and its action is more like that of massage, of which I will now speak.

How does massage act? Let us consider that part of massage called kneading, by some deep massage. It consists, as you know, in grasping the muscular tissue and subjecting it to a sort of kneading manipulation. What is produced by this kneading? Precisely the same that the muscle does itself during exercise. The pressure of the masseur's grip squeezes the blood out of the muscular tissues; when he relaxes his grip the heart sends a new supply of arterial blood into it. There is, however, some difference, and one is this, that while the muscle in the performance of contraction uses up part of its own substance, there is no such destruction of tissue in the muscle subjected to massage; hence there are no waste products formed and no fatigue. In fact, a sense of fatigue may by massage be removed, for massage promotes lymphatic circulation for the same reasons that it promotes venous and capillary circulation. While, however, the reflex action of exercises are obtained almost exclusively through their influence on motor centers, it is in massage obtained through action on both motor and sensory centers; for no form of massage can be applied except on or through the skin, hence there will always be a certain action on the sensory nerves. This action is, however, not an accidental achievement only; it is commonly sought for, and certain forms of massage, like percussion, slapping, hacking, etc., are administered with this particular object in view as a part of the treatment for heart disease. Special forms of massage, like vibration, percussion with the edge of the hand over the region of the heart, and pressure on the vagus nerve, are administered to exert a special influence on the heart itself. Part of this action is of course produced by contact with the skin, but the effect is so pronounced that it would be unreasonable to deny that the action is not produced by direct influence on the centers of the heart itself, and through them by reflex action on the cardiac and vaso-motor centers of the brain.

Thus you will understand that in massage we have a powerful adjuvant to exercises, its advantage being that it causes no fatigue and may be applied to the very worst cases, and improve them so much that exercises may be administered later with benefit. Massage can, however, be overdone; but the trouble will then come from over-relaxation of the vascular system, and this condition, on account of the decrease in the blood pressure, is just as unfavorable to the heart as when the blood pressure is too great.

In conclusion, I will say that it is no longer necessary to go to Nauheim for the baths, as artificial baths are now prepared that can be administered with the same effect in the patient's own bath tub; and if he can secure the services of a good masseur and medical gymnast, he may, under proper direction, enjoy the Nauheim treatment with the same benefit in this country.

Carbuncles on the shoulders or scapular region are frequent accompaniments of diabetes.

PELVIC ABSCESS.

By O. Beverly Campbell, A.M., M.D.,
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THE causation of pelvic inflammation is an infection, which may gain entrance to the pelvis through the fimbriated ends of the Fallopian tubes, through the lymphatics and blood vessels, and through wounds in the cervix and vagina. Non-septic or non-specific inflammation occurring in the pelvis, such as an ovaritis or salpingitis from suppressed menses, is of rare occurrence, and I believe in such cases an infection from the endometrium might be traced. An inflammation of the pelvis through any of the routes of infection may terminate in pus formation. The vast majority of cases of pelvic abscess are found to be intra-peritoneal, and are associated with diseased appendages which would seem to point conclusively to the tubes as the most frequent source of origin. A primary cellulitis, which sometimes occurs from an infection through the lymphatics, or through wounds in the cervix or vagina, if treated aseptically and antiseptically, will usually recover without pus formation. So rare, indeed, is extra-peritoneal abscess, that eminent gynecologists have failed to observe a single case. By the term extra-peritoneal is meant that the inflammation and pus accumulation are without the peritoneal cavity. Munde claims to have often met with extra-peritoneal abscess, and asserts that: "Pelvic peritonitis and pelvic cellulitis are, in fact, independent and entirely unassociated diseases, just as pleurisy of one part of the lung may occur at the same time with an inflammation of the substance of the lung at another point." And, further, "Among 681 cases of pelvic peritonitis and pelvic cellulitis, 602 were pelvic peritonitis, 79 pelvic cellulitis, and out of the 681 cases 103 of them were pelvic abscess, or 15.1 per cent. Thus, according to these statistics, the ratio in regard to the frequency of pelvic peritonitis and pelvic cellulitis would be about eleven cases of pelvic peritonitis to one of pelvic cellulitis." (*American Journal of Obstetrics*, November, 1897.) Out of the 103 cases of pelvic abscess he fails to give the number of these that were extra-peritoneal, so that it is impossible to formulate the ratio existing between the intra- and extra-peritoneal cases. I believe pelvic peritonitis and pelvic cellulitis are associate diseases, in fact, a part of the same process, and are only occasionally found existing alone. When the infection takes place through the lymphatics or through wounds of the cervix or vagina and primary pelvic cellulitis ensues, the infection spreads generally to the pelvic peritoneum. So, too, when the infection is through the fimbriated ends of the tubes, the infection may spread and often does involve the cellular tissue.

The two great factors in the production of pelvic abscess are septic puerperal infection and gonorrheal infection, and while there are other causes, such as tuberculosis and unclean opera-

tions upon the cervix and vagina, yet they are in the minority.

The usual steps in the development of pelvic peritonitis are an endometritis extending to the tubes, producing a salpingitis; an exudate may seal the ends of the tubes, pus forms and distends the tube (pylosalpinx,) the infection may spread through the walls of the tubes, or the greatly distended tube may rupture, producing pelvic peritonitis and abscess. Again, the ends of the tubes are not sealed by the inflammatory exudate, the intection spreads to the peritoneum and ovary at once. The infection may stop in the tubes and ovaries, as a salpingitis or ovaritis, or by the development of a pyosalpinx, and further damage to the pelvic tissue may not ensue, dependent somewhat upon the virulency of the poison and the sealing of the ends of the tubes.

The treatment of pelvic abscess is to evacuate the pus, remove the diseased appendages and occasionally the uterus, establish drainage and remove the cause of infection. This is not always practical, for we meet with cases where the condition of the patient is so extreme that it may not be advisable to do more than evacuate the pus, wash out the abscess cavity and establish drainage.

We have two routes through which the pus may be evacuated and the appendages removed, viz., the supra-pubic and vaginal. We find eminent operators in America and on the Continent who advocate the supra-pubic to the absolute exclusion of the vaginal, and probably nearly as many just as eminent who favor the vaginal route to the exclusion of the supra-pubic. Both routes have individual advantages, and in each case the route should be selected which will offer the best advantages in getting rid of the pus and offending appendages, with the least danger of infecting the peritoneum. I believe the supra-pubic route possesses advantages superior to the vaginal, especially in cases seen early enough to admit of a thorough operation. The advantages of the supra-pubic route are that it admits of inspection, so that we can avoid breaking through the abscess wall except at the point of attack, and can more easily inspect the appendages and accomplish their removal. There is less danger of wounding the intestines, and an injury to them could be easily repaired. If an incision of proper length is made and use is made of the Trendelenburg position, it is possible, even in cases where the adhesions are formidable, to inspect each manipulation. There is nothing to be gained by a very small incision, necessitating work absolutely in the dark; we find operators who, it would seem, had no other aim than individuality, who pride themselves seemingly upon their ability to dissect out a pus tube or ovary through an inch incision. About a year ago the writer witnessed an eminent surgeon operate through an incision which barely admitted of the passage of one finger, for the removal of a pyosalpinx. The adhesions were formidable, and one hour was consumed by the operator in accomplishing his task. I sincerely doubt whether or not one less dextrous could have succeeded at all in completing the operation under like circumstances. Certainly, a larger incision and the Trendelenburg position would have been such an aid that a less skilled operator could have accomplished the same work in half the time.

The objections that may be reasonably urged against the vaginal route is that it is necessary to depend upon the sense of touch altogether; it is work in the dark. In pelvic abscess, where it is found necessary to remove adherent appendages, the operation through the vagina is very difficult, and injury to the intestines and ureters is likely to occur. In cases where the abscess reaches low in the pelvis, pointing into Douglas' pouch, I certainly would prefer the vaginal route under such circumstances, believing that there would be less danger of infecting the general peritoneal cavity in operating through the vagina. Mere incision and drainage should be practiced only in desperate cases, where the condition of the patient will not admit of a more formidable operation. Patients quite often make a complete recovery from incision, irrigation and drainage; but, as it is often found necessary to operate the second time to complete the cure, it is always advisable, where the condition of the patient will permit, to make the complete operation at first. Pus cases do not stand well prolonged anesthesia and shock, so it is very necessary to operate quickly, and I recommend thorough irrigation and drainage.

THE TREATMENT OF SCARLET FEVER WITH ANTISEPSIS.

By James G. Brubaker, M.D., Philadelphia.

WHILE scarlet fever is perhaps the most contagious of the exanthematous diseases, yet it is at the same time the most within our power to prevent. While the infective principle is not diffusible to any great extent or distance, there is no such thing as dilution; each particle being capable of starting the disease afresh in its typical form.

Of the external influences hindering the lodgment and multiplication of the infectious principle, sunlight and open air are not favorable to its prolonged existence and growth. Prophylaxis includes isolation and disinfection. These are closely allied and simply parts of the same process in reality.

The sick room should be large and airy, and preferably on an upper floor. All unnecessary articles of furniture, etc., should be removed before the patient is taken into the room. There should be thorough ventilation of the room, the patient being but little likely to take cold. Screens of metal and linen should be placed so no draft reaches the bed. If possible, select a room with an open fireplace. This does well for two purposes. First, it furnishes an excellent means of ventilation, and secondly, it is a convenient place to burn the sweepings of scales, etc. A sheet moistened with some disinfecting fluid should be suspended just inside the door. Sometimes one is also placed outside, but the absence of this is better, as it is an inconvenience,

and the inner one is sufficient. The disinfectant should be mixed with glycerine to keep it moist and thus arrest floating material. A small wash kettle or tub should be placed to receive the soiled clothing or towels. This should contain a solution of formaldehyde or carbolic acid. These clothes should be boiled for at least one-half hour before being handled by laundresses. Soft rags, instead of handkerchiefs, should be used to absorb the discharges from the nose and mouth and these should be burned when soiled.

Only the necessary attendants should enter the room. The physician should have a gown of linen, such as are worn by surgeons, hanging at the door of the sick room where he may put it on immediately on entering. When through with his inspection the gown should be put in its place, the hands disinfected, and he should pass at once from the house. If other members of the family are to be seen this should be done before seeing the fever patient. When desquamation occurs a sheet should be placed at the side of the bed to collect the scales and the scales in the bed should be gathered and burned.

The patient should be kept in bed until the desquamation is fully completed. This should be insisted upon because of its value to the patient himself. All sudden changes of temperature should be avoided, as these throw extra work upon the kidneys, which are very apt to be involved. Another reason is that this lessens the risk of transmission of the disease to others much more than if the patient were allowed out of bed. Before finally leaving the sick room the patient should have two or three warm soap baths at intervals and be dressed in uncontaminated clothing. The room should be disinfected by liberating sulphurous acid in the presence of moisture or by the use of gaseous formaldehyde. It should be exposed to sunshine as much as possible and be repapered and repainted. People who have not had the fever should not occupy the room for some time. If any mistake be made let it be on the safe side.

I speak now of the propriety of sending away other members of the family if one child be attacked. One gets definite ideas on these points in the course of long experience. One difficulty in regard to this plan is that the attack often develops in the night. If the children of a family are attending school, or if away during the day, isolate the one who develops fever before the others come home. Make definite arrangements as to who is to care for the sick one and complete the preparations so far as possible. Then let the others come home and stay at home, as usually in most cases the children have all been at the same school or with the same playmates and have all been exposed to the chances of getting the fever. This being the case, they will probably have an attack without deriving it from the one already sick. Hence if sent away they incur great liability of being sick away from home. This puts an unneeded inconvenience upon the relatives or friends to whom they are sent, and also adds to the anxiety of the mother by reason of her having sick ones in two places. If, on the other hand, the other children have not had the same exposure or at least not contracted the disease, they can be kept in the same house with a minimum amount of danger if the precautions named are faithfully carried out. Under these conditions they are practically sure of not getting the fever from the existing case. But if from any cause they should get it they are still better off at home, where they can all be cared for together, even in the same room if one large enough can be used for this purpose. So under any circumstances I think it a great deal wiser to keep all the children under one roof.

I speak next of the medicinal treatment of scarlet fever. As there is no abortive treatment the method in mild cases should be expectant and in severe ones symptomatic. The diet should be the ordinary fever diet, milk, jellies, soft foods, etc. Alcohol may be given in severe cases in the form of wine whey or in other ways. Fluids should be given to the patient freely, water in abundance, and milk. The skin should be sponged twice a day with water or alcohol. Lard or goose-grease inunctions every three or four hours allay itching and tend to promote sleep. The medicine, nourishment and inunctions should be timed so as to give all at about the same period, then the patient should be let alone and not be disturbed until the next period, thus giving a clear time for rest and sleep. The body linen need not be changed every day, as this increases the number of fomites and makes so much more risk of propagation. The mouth, nose, and throat should be sprayed from time to time with Dobell's solution or similar preparation. This removes the secretions and to a certain extent disinfects at the same time. For the sore throat use Löffler's solution or hydrogen peroxide. Steam in the room is very useful in many cases.

If indicated, frequent small doses of calomel up to the verge of purgation may be employed. Extreme restlessness may be controlled by moderate doses of chloral hydrate until a certain degree of somnolence is attained. Small doses of the syrup of lactucarium every two or three hours until the tossing about ceases is a very good remedy. The child is easily aroused to take its medicine, and in from twenty-four to forty-eight hours an increased flow of urine will be noticed, aiding much in the solution of the toxins formed in the body.

Symptoms should be treated as they occur, constipation with fractional doses of calomel. Diarrhea may be controlled by regulating the diet, perhaps diluting the milk given, or applying a cold compress to the stomach. Vomiting usually ceases spontaneously, but when it is continued do not give drugs. Give but little water, and withhold food. Do not urge food upon an irritated stomach at the beginning of an acute disease. If the febrile movement is high, antipyrine is the best of the internal antipyretics. In grave cases of pyrexia sponging or the cold pack may be used. In some cases the cold bath may be used, but if it is, the child should be put in a blanket and lowered into a bath of at least 85 degrees. By means of small pieces of ice the temperature may be reduced to 70 degrees Then wrap up, dry, and give nourishment or alcohol. Repeat this process if necessary. Bel-

ladonna ointment and lanoline may be used for enlarged glands if they occur.

Do not depend too much on a variety of drugs. Specifics have not proved of much success.

FUEL GASES AND THE LUNGS.

By Geo. B. H. Swayzee, M.D., Phila., Pa.

DISEASE, in its comprehensive sense, is written in the singular number. The differences in the physical organs which more especially yield or succumb to the depressed or perverted nutrition and disordered functions that constitute what we recognize as symptomatic disease, do not materially necessitate difference in the initial cause or incitant. As a hot iron or coal of fire may produce severe variations of results and suffering, according to which parts of the organism their burn assaults, so is there radical unity of a great deal of disease, and also as effective unity of a great deal of its cause.

When traced to its actual bases, most disease common to the human family physiologically and pathologically arises from but three elementary sources: the air breathed, the food used, the occupations pursued. Since the breathing-air is the most vital and voluminous need of the human system, it stands always first in importance, and is ever the most continuous in operation as the basis of health and reviver of existence. By the fact that the breathing organs are the most directly under the influence of the breathing-air, and also the most numerously involved as cause of death, it convincingly follows that our abnormal and prejudicial qualities of breathing-air are our most productive agencies in the degeneration of the human constitution.

There has been a monstrous deal of sophistry talked and believed about the heredity of certain diseases which doctors failed to restrict or cure. As a medical propaganda, that doctrine is neither just nor useful. It scandalizes parentage through all generations—a veneer of pathological heresy—a verbal scapegoat for ignorance or incompetence. Elsewhere I have endeavored to demonstrate that unless a child is born with a disease it has not inherited that disease, since its parental physical heritage consists of just what constitutes its organization when born—every atom of which is eliminated after weaning, and replaced by material elaborated from the nutrient table supplies common to childhood and youth and adult life. The common daily environment of families, their habits, modes of housing, generation after generation, are very much alike. As similar causes result in similar effects, why should not the diseases of children resemble those of parents at similar stages of experience? As to the lungs and systemic constitution, the chief component of family environment is the breathing-air which they habitually respire.

After thirty-six years of practical study of cases of phthisis and their inductive environments, I have reached the candid conclusion that three-fourths of the pulmonary disease which enshrouds the homes of the people is induced by the rasp and ravage of degenerate and degenerating breathing-air incident to house-air-customs and conditions of personal occupations. Also, I believe that the old traditions of broadcast transmission of consumption, by the initial effect of parental conception of offspring, will in the near future melt away before positive evidences of the actually constant deteriorants in the breathing-air, which wear on the lung tissues, on blood corpuscles and eliminative functions of so many individuals from birth till death. A trained taste is the gustatory guard for the stomach's three meals a day, while the neglected lungs, with ceaseless action swing their 26,000 tainted respirations every twenty-four hours, like open gates to the unrecognized and unthought-of gaseous foes to health. It is evident that any diseased process in the lungs tends to be progressive, so long as the air inspired continues to convey irritating and toxic elements, and hence said diseased process must daily widen the cheerless gap between health and hope.

There is nothing new to cause consumption. The old conditions which have always prevailed, prevail yet. Since it is a conditional disease, a conditional systemic defalcation, it is impossible to discover any device for its cure except the conditional exemptions offered only by purer house-air on the plane of the masses. Peer carefully into the places where the larger portions of civilized humanity live, work, sleep, study, worship, seek diversions; examine scrupulously the conditions of lung environment. Carbonized breathing-air, charged to various degrees with debilitating carbonic oxide gases from fires, lamps or gaslights, kerosene stoves or gas stoves; the air often dried, baked, close and contaminated with dust, debris of the wear and waste of mankind and animals and the usage of things; air deoxidized by rebreathing, by crowd-breaths, by neglected flues and defective drafts, by drift from outside chimneys, furnaces, locomotives, works innumerable, everywhere, indoors and out. What is the result? Reduced oxygenation of the blood, anaemia, depressed nerve-tone, stealthy debility; physical sensitiveness, fugitive pains, irritated throats and tracheas, catarrhal bronchi, initial pneumonic damage from the rasp of toxic, overheated, degenerate air; malnutrition, unbalanced functions, emaciation, tuberculous deposits of disorganized waste-products, ulceration and exhaustion; such is a common chain of mischiefs which lets humanity down to consumptives' graves. For as an initial status of health, unless the blood corpuscles be normally relieved every minute of passing time by adequate oxygenation and other means of depurition, they are helpless against the destiny of malnutrition and abnormal deposit in resultant form. In the physiological and pathological process so meagerly outlined is revealed the key to consumption everywhere.

It is impossible to preserve to general humanity the boon of sound lungs, or to restore lungs that are breaking down, if individuals almost universally feed to the lung tissues and the blood irritating and cankering air with almost every breath. Speculations about lung disease, as dependent on differences of climate, altitude, hu-

midity out of doors, are largely abortive. It is the quality of air actually inspired by each individual, at daily or nightly work, business, home, place of congregating, which determines the result on lungs and constitution. Inasmuch as the lungs are the great exhalers of poisonous carbonic acid gas and dead organic matter they naturally wear down through counter corrosion, unless abundantly sustained by purity of air with each reciprocal inspiration. Independent of all problems of climate or altitude, heredity, form of chest or respiratory expansion, the fretted lung tissues often yield between the triangular embarrassments of local deteriorated breathing-air, toxic-burdened blood, and crippled nervous energy. Confined air, gaseous from burning fuels and illuminants, rendered doubly impure by respiration and other emanations from the human body, returns with each successive breath physical depravity to the abused lungs which dangerously prime them for the development of pneumonia or phthisis, or both, in the order of natural succession. Men and women who conduct daily business in small, cell-like rooms warmed by gassy stoves or registers, and lighted in dull weather by vitiating gaslight or lamps, which rob the close breathing-air of its oxygen and burden it with toxic carbonic oxide, are a class especially prone to resulting nervous prostration, la grippe, pneumonia, or, eventually, phthisis. Air adulterated with the ordinary fuel gases is unfitted for the use of the lungs unless free and constant additions of outdoor atmosphere obviate the danger to the blood-mass. People who breathe air filled with an excess of exhaled organic matter from closeness, or air presenting a deficiency of oxygen from any other cause, soon have the blood and organs of the body excessively encumbered with waste matters that contaminate the system and impair the integrity of the lungs.

Our conglomeration of modern heating and cooking appliances, our approximately air-tight houses, immense but stifling railroad travel, teeming factories and other industrial plants requiring a vast consumption of coal for their operation; our crowding of dwelling houses and tenements with their scathing heaters and gassy stoves, have enormously increased the wear on lungs and heart, brain and nervous system of mankind, by so largely subverting the fundamental sustainer of physical integrity, and making a deficiency of oxygen, and an excess of carbon-dioxide, in the immediate breathing-air of all classes. The force of this fact is readily demonstrated by contrasting the difference between lung fatalities in summer months, when houses and business places are kept open for ventilation of fresh air, and winter months, when much greater quantities of fuels are burned and houses confine gases indoors by being kept closed. In Philadelphia, for week ending August 1, 1896, deaths from inflammation of lungs, 14; consumption of lungs, 45. Week ending February 29, 1896, deaths from inflammation of lungs, 77; consumption of lungs, 60. Week ending January 2, 1897, from inflammation of lungs, 94; consumption of lungs, 54. I happen to have before me also he following data: For week ending November 7, 1898, deaths from inflammation of lungs, 25; consumption of lungs, 62. Now compare this autumn result with the ensuing midwinter result. Week ending January 14, 1899, deaths from influenza, 59; from inflammation of lungs, 121; consumption of lungs, 64. Week ending January 21, 1899, died of influenza, 32; of inflammation of lungs, 104; of consumption of lungs, 64.

Of later years pneumonia, pneumonic grippe, has been rife among the better class of business men and men in public service; men whose means allow them to live in overheated houses, sleep in heated bedrooms during the colder months; who occupy much time in stuffy offices or counting rooms, and travel considerably in intervals by railroad. Although cases of pneumonia and grippe are more numerous in winter months, these allied affections are not caused by cold weather. Those most exposed to rigors of season, as drivers, hucksters, cabmen, persons who virtually live out of doors all winter, are almost universally exempt from pneumonia. A poisoned stomach is inflamed; a poisoned throat and lung are inflamed; the person who is shut in with an excess of toxic combustion gases in the breathing-air has his lungs poisoned by the caustic irritant inhaled, and pneumonia and prostration rapidly ensue. The breathing-air conditions which gradually induce consumption are repeated or continue their wear on the lungs and constitution from season to season, and hence the steady march and relative incurability of consumption among the people.

Theories of the pathology of consumption have been skillfully elaborated by many writers, and definite lines of treatment proposed alongside the details of their deductions; but the incessant march of the destroyer has in no degree materially slackened. An enormous variety of special medicines and expedients, intended to meet the requirements of the disease, have been devised and heralded as cures, but all have practically failed alike where this form of degeneration has fairly gotten under way. Nevertheless, the progress of the complaint is usually slow, affording ample time for alleviants to effect curative results. The lesson of such nearly universal failure teaches us that the dominant *causa causans* of the blight has not been comprehended all along the tragic lines of consumption, but followed every case unrecognized and hence unavoided, while its decimating work kept silently in motion with the stealth of devitalizing breath. Every climate and atmosphere have been subverted by indoor and business conditions, by public works and by modes of travel, which unsuspectedly impair to some degree the respiratory processes and organs of multitudes of humanity, both before and after physical stamina begins to break. Most of the toil performed in towns and cities for a livelihood is wrought by both sexes indoors and amid breathing-air highly prejudicial to physical tone. The nature of many industries where girls and women are employed, and the blind indifference of most employers to the needs of sanitary air for workers continuously, grievously conduce to the development of

much lung disease and immature death. As far back as most persons can remember, the majority of these places were heated during work-day hours by gassy furnaces and stoves, perhaps six months of each year. Until the advent of electric lighting the local air in cloudy weather was still further vitiated by smoky lamps and gaslights. And on going to their homes at night these fatigued toilers generally adjusted themselves to a continuation of similar conditions—close rooms with dust, confined heat and fire gases, exhausted breathing air—because of an ingrained superstitious "fear of taking cold" when inside of the house, if fresh air is admitted for its saving ventilation.

Surgery Among Birds.—Some interesting observations relating to the surgical treatment of wounds by birds are quoted in *Our Dumb Animals*, as having been recently brought before the physical society of Geneva by M. Fatio. He mentions the case of a snipe which he has often observed engaged repairing damages. With its beak and feather it makes a very creditable dressing, applying plasters to bleeding wounds, and even securing a broken limb by means of a stout ligature. On one occasion he captured a snipe which had on its chest a large dressing composed of down taken from other parts of the body and securely fixed to the wound by the coagulated blood. Twice he had brought home snipe with interwoven feathers strapped on the site of fractures of one of the limbs. The most interesting example was that of a snipe, both of whose legs he had unfortunately broken by a cruel shot. He recovered the animal only on the day following and found that the poor bird had contrived dressings and a sort of splint to both limbs. In carrying out this operation some feathers had become entangled around the beak, and not being able to use its claws to get rid of them, it was almost dead from hunger. In a case recorded by M. Magnin, a snipe that was observed to fly away with a broken limb was subsequently found to have forced the fragments into a parallel position, the upper fragments reaching to the knee, and secured them there by means of a strong band of feathers and moss intermingled. The observers were particularly struck by the application of a ligature of a kind of flat-leaved grass wound round the limb, of a spiral form and fixed by means of a sort of glue.

Mosquitos and Malaria.—Recent investigations into the connection between mosquitoes and malaria are summed up in a paper by Dr. P. Manson (*Brit. Med. Jour.*) as follows: "The observations tend to the conclusion that the malaria parasite is for the most part a parasite of insects; that it is only an accidental and occasional visitor to man; that not all mosquitos are capable of subserving it. That particular species of malaria parasites demand particular species of mosquitoes; that in this circumstance we have at least a partial explanation of the apparent vagaries of the distribution of the varieties of malaria. When the whole story has been completed, as it surely will be at no distant date, in virtue of the new knowledge thus acquired, we shall be able to indicate a prophylaxis for malaria of a practical character, and one which may enable Europeans to live in climates now rendered deadly by this pest."

Neurasthenia, with Special Reference to the Best Mode of Treatment.—By Arthur E. Mink, M.D., Professor of Mental and Nervous Diseases in the College of Physicians and Surgeons; Consulting Neurologist to the City Hospital, and to the Baptist, Jefferson and Woman's Hospitals, St. Louis.—* * * All of the various symptoms of neurasthenia, be they sensory or motor, psychic or somatic, slowly but surely yield to general systemic and tonic treatment, and disappear, *pari passu*, with the restoration of the nervous system to its normal condition.

In combating the insomnia usually present in aggravated cases I use drugs only as a last resort, for a properly regulated time for meals and attention to the diet usually suffices. Sometimes I have found it absolutely necessary, however, to temporize, and one of the most valuable agents for this purpose, in my opinion, is a first-class preparation of cannabis indica—I use a fluid extract, giving 10 to 15 minims on sugar, and repeat as the urgency of circumstances requires. It is not only a valuable hypnotic, but it also relieves the mental depression, the general restlessness and paraesthesias and paralgias of the neurosis. Constipation can be relieved by gentle massage and a regular hour of going to the stool daily. It is absolutely wrong to give the patients cathartics, especially those in the form of pills, for the pill habit is soon formed and they soon become a prey to the various advertised nostrums so often seen in our street-cars and on the highway. It should be our aim to suggest to the patients, for obvious reasons, the mildest laxatives. The caliber of the lower bowel should be maintained at all hazards, and all those preparations which produce a mushy stool avoided.

* * * * *

It was my custom formerly to prescribe the various forms of iron, but an extensive experience has induced me to abandon them entirely. The relief obtained from their use was palliative and transitory. In the treatment of neurasthenia I have a decided preference for the compounds of arsenic and gold. The preparation which suits me best, and which I have been prescribing extensively for the last few years, is the liquid of bromide of gold and arsenic—arsenauro. It is not only very valuable as a systemic and nerve tonic, but at the same time seems to have a peculiar and beneficial sedative effect, due doubtless to the bromide present in its composition. Hence it not only allays the tremors and restlessness in these cases, but it is also of great benefit in sexual neurasthenia in calming the morbid irritability of the genito-spinal centers. We must use it persistently throughout the entire course of treatment, and bear in mind always that the neurasthenic can stand very much larger doses than they would care to admit—20 or 30 drops, largely diluted with water, after each meal.

A Means of Emptying the Bladder.—Anderson (*Louisville Med. Monthly*) says that the bladder, when partially paralyzed from parturition or any other cause, can always be made to empty itself perfectly by throwing a large amount of very warm water into the bowel, thereby doing away with the necessity of using a catheter, a most important consideration, particularly when the patient lives at a distance from the doctor.

After difficult and protracted labors he has been obliged to use the catheter every day for weeks at a time, which was annoying to the patient and inconvenient to himself. Since using the plan here recommended, he has had no trouble in this direction, the bowel and the bladder emptying themselves at the same time.

Taxis in Strangulated Hernia.—The following method of performing taxis in cases of strangulated hernia (*Atlanta Med. and Surg. Jour.*) is offered by Dr. William B. De Garmo, who claims for it a very large proportion of successful reductions. His very large experience with this class of cases should give the recommendation great weight. The instructions are, to take hold of the tumor and *draw it down*, in this way lengthening the part in the canal at the point of constriction. Then, without attempting to push it up, steady pressure is to be made on the tumor with the idea of forcing out its contents. If the patient is a child, it is also well to suspend the little one by the leg while taxis is being made.

The Use of Chloroform in Rooms Illuminated by Gas.—Dr. Love, in the *Medical Mirror*, says that those of us who believe in chloroform in labor "have often, when engaged in our work at night in a room lighted by gas, been seriously distressed by a spasmodic cough." At least, Dr. Love has to such a degree as almost to preclude such work on his part at night, leading him to believe that possibly he might be afflicted with an idiosyncracy. He suffered for years before finding it was invariably when using chloroform at night and in gas-lighted rooms. He did not appreciate that his discomforts were due to chlorinated vapors developed by the union of chloroform with the carbon thrown off by the consumed gas.

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"God offers to every mind its choice between truth and repose. Take which you please; you can never have both. Between these, as a pendulum, man oscillates."—EMERSON.

THE GOVERNOR OF SANTIAGO.

OPPORTUNITY develops qualities of the highest order, brings to the front men who formulate great plans and bring them to a successful termination with an energy and a wisdom which we never dreamed they possessed. War is, to a certain extent, a science in which the weapons of destruction are worked out by scientific brains in the study, the laboratory and the workshop, and their uses taught by long years of study and practice in which success depends in a great measure upon that clearness of comprehension of knowing just when and how to use them. The leaders in our recent war have accomplished their work with an energy and intelligence and a brilliancy unequaled in any war in ancient or modern times. But the work is only commenced; the hardest task yet remains, that of utilizing it in results quickly accomplished, rounding out in full completeness the plan commenced and prosecuted with so much energy and wisdom. And just now the right man steps out from the arena of battle, lays down his sword, and, taking hold of the helm of government, shows an energy, a wisdom, a clearness of comprehension of a most difficult problem which points out the way of ultimate success in pacification and government of the new territories for which we are at present at least responsible.

That man is Leonard Wood, army surgeon, who proved himself in the Indian warfare among the Apaches, under General Miles, not only a good surgeon but a brave and daring fighter, having as captain commanded in several expeditions against the Apaches with such skill, courage and gallantry as to gain the medal of honor. It was most fortunate that the command of the first regiment of cavalry, authorized by Congress to be raised from the riders and riflemen of the Rocky Mountains and the Great Plains was conferred on Dr. Wood, the physician of the President and Secretary of War, with his friend and close companion, Theodore Roosevelt, then Assistant Secretary of the Navy and now Governor of the State of New York, as Lieutenant Colonel. With the thorough knowledge of everything necessary for the proper equipment of a regiment of cavalry of Colonel Wood and the energy of Colonel Wood and Lieutenant Colonel Roosevelt the Rough Riders were armed with Krag-Jorgensens and smokeless powder, and were ready in time to be brigaded with the regulars and take their part in the battle which has made the name of the Rough Riders one of the proudest in the annals of the war, and elevated their Colonel first to the rank of Brigadier-General and then to the Governorship of the province of Santiago.

It is in the latter capacity that the soldier physician has won his greatest and most unfading laurels and accomplished so much by his practical knowledge as a physician, his honesty, integrity and wise statesmanship, which is solving the question of government in Cuba, and endearing him to the hearts of all liberty-loving people. Under his firm leadership the people began to get that justice from the ruling of the courts which they had seldom known before. Schools have been opened and the children taken off the streets, the half starved inhabitants are fed and many of them set to work in constructing new avenues and roads and in cleaning the streets. The soldier physician was just as much as home in fighting disease in the streets and harbor of a great city as in fighting the enemy on the battle field. Drains which had been clogged were opened and cleansed, the harbor dredged, the water supply purified, the hospitals reorganized and all the breeding places of disease cleansed and rendered inoccuous, with the result that the death rate fell 75 per cent., and the dreaded yellow fever epidemic failed to make its annual visit. In a few weeks' time Santiago, from being one of the most unhealthy, filthy and death stricken cities in all the island, has, through the intelligent, energetic leadership of this soldier physician, become one of the healthiest and cleanest, and not only its people, but those of the whole province, placed in the enjoyment of a liberty with a brighter future opening before them than they had ever known before. General Wood, in his administration of the

province of Santiago, has struck the key note of that emancipation from old abuses and the development of progressive ideas which will give to this beautiful island all the incentives for a free government which will foster the industries and resources of the young republic and bring to the people peace and comfort. The lesson taught by Dr. Wood in the last few months we trust will not be forgotten in the future management of the Philippines.

FACTS TO BE CONSIDERED IN THE REORGANIZATION OF THE MEDICAL DEPARTMENT OF THE ARMY AND NAVY.

THE necessity of placing the State and National troops upon a better sanitary basis, with more authority in the medical department, has become so apparent that it is of the utmost importance that great efforts be made immediately to gather the best advice possible to secure this end. With this object in view the Legislature of every State in the Union, as well as the National Congress, should offer the strongest inducements to secure a thorough discussion of the subject. Aside from patriotic motives, suitable prizes would bring a quick response from scientific and practical men. Let each State offer at least one thousand dollars, and the government at Washington ten to twenty thousand, for the best essays upon sanitary affairs of the army, the National Government selecting from the States the best papers for final competition.

There are many whose experience will surely guarantee intelligent suggestions and information, as well as practical theories. There are hundreds of lost or hidden ideas which may be reclaimed by comparatively obscure persons whose modesty has heretofore kept them in the background. Such persons are neglecting a duty which they owe to humanity by not giving the results of their knowledge and experience as to the management of armies to keep them in the best possible condition for active and inactive service in every possible climate and location.

There are many minute details which have been hitherto more or less neglected, which are of the utmost importance to the army and navy —but more especially the army.

Such essays must consider the pitching of tents as well as the quality and quantity of food, and its proper preservation; not only the exposure to heat, cold and dampness, the effects of fatigue on the march and indolence in camp; not only the disposition of offal, fecal matter and other filth; not only the greatest care of the water supply for drinking, cooking and bathing, but also the moral welfare of the soldier himself. Let no officer presume to meddle with the religious convictions of his men, for these are rights that no government and much less no military commander, can interfere with without endangering discipline. Give every soldier the best practical opportunity to satisfy his conscience.

To return to the needs of the body: Let us seek a greater knowledge of foods and their care and preparation. It is astonishing how little is taught in our colleges upon such important matters as these. It is amazing how little is known by physicians and even educated cooks about the chemistry of the kitchen. How many of our army surgeons have ever read Bouchard? Had they done so there would not have been such a large amount of preventable sickness among our poor soldiers; many of whom were at the mercy of men incompetent and in every respect unfit for their duties. Facts mentioned by Bouchard were noticed and attention called to their importance by one of the consulting physicians of the Metropolitan Hospital, Dr. Jas. Robie Wood, nearly twenty years ago; and nearly forty years ago by Jahr, of Paris, more particularly in regard to the dangerous diarrheas produced by recooked, warmed over or improperly exposed animal foods —especially under certain atmospheric conditions Again, how exceedingly superficial is the knowledge of our medical men in regard to the best antiseptics; too much reliance has of late been placed upon expensive money making proprietary antiseptic solutions, rather than bother the mind about advising proper, cheap and easily obtained chemicals. There is an immense field to be gone over by essays such as we have suggested, and so it may finally be found absolutely necessary to encourage separate essays, such as one on army feeding, food preservation, etc. It has always seemed to us that dried meats are far better for an army in the field and on the march, but some clear mind may suggest better things.

The proper marching of an army is the next important factor in preserving its health. Probably the greatest general for the care of an army on the march was Stonewall Jackson. No general understood rest as he understood it. No man could march an army such long distances and so rapidly as he could, and without rest go instantly into battle. His was a quick march with very frequent rests. The rests were only for three to ten minutes, giving no time for stiff joints.

All possible points must be considered in papers upon the care of soldiers. Or each possible point must be separately considered and ideas developed which may prove of immense value in future wars, if such a sad necessity ever comes upon us.

KUMISS.

A PART of the education of every trained nurse is the preparation of delicacies for the sick, which includes not only the preparation, but the quality and character of food to meet different conditions of the stomach and the wants of the system. Every trained nurse is taught how to make kumiss, which has become recently such an important article of nutrition to the invalid. As the kumiss, or fermented milk, contains a little alcohol, with fat, caseine, lactic acid and carbonic acid gas, it is usually very agreeable to the stomach, both nourishing and refreshing, and containing so little alcohol that there is but little, if any, subsequent reaction from its effects. As made in the hospital and the country home a quart bottle is filled with milk, to which is added two tablespoonfuls of white sugar dissolved with hot water, and a quarter of a two-cent cake of compressed yeast. The cork is securely fastened, and the bottle placed for six hours in a temperature of from 70 to 80°, and then transferred to the ice box for about twelve hours, when it is ready for use. Of course, it can be kept for several days at a moderate temperature before being placed in the ice box.

A NEW COFFEE.

IT is an interesting fact that chemically, milk and grape juice are almost identical, and that the nutritive qualities of both are almost the same, a pint of each being equivalent to at least a pound of meat.

In what is supposed to be the active principle of the two great domestic drinks of the world, coffee and tea, we find a like chemical similarity existing between caffein and thein, both to a certain extent stimulants, and both having the power of checking the waste of nutrition until the full power of the food has had time to exert its influence on the elements of life and strength. It is for this reason that the miner can accomplish so much hard work, when for breakfast at least his principal food is a pot of coffee and a crust of bread, and many a business man goes to his morning's work with no other nourishment than a cup of coffee and a roll.

The action of tea and coffee, although differing to a certain extent, yet undoubtedly reach their results through the same physiological line; the same as ignatia and nux vomica, the active principle of both of which is strychnine.

It has been generally supposed the narcotic principle of coffee, which at times produces positive toxic, or drug action, is caffeine, and that the stimulating effect of the beverage is owing to the 1 or 1.5 per cent. of that alkaloid which it contains, but recent scientific investigations show that this is true only in part, as much of its beneficent action can be traced to the aromatic substance contained in the bean developed in roasting, giving the delicious aroma, in which caffeine has no part.

A variety of coffee grows wild in the island of Bourbon, bearing the name of caffé marron, which, while it contains no caffeine, still has to a certain extent the odor and the stimulating effect of the coffee of commerce. This coffee lacks much of the delicate and fragrant aroma of the best grades of coffee, but it must be remembered that the shrubs grow wild and have never had that cultivation so essential in developing the highest qualities of any product. In time, under proper cultivation, this, to us, new product, may and probably will, have the delicate flavor and much of the stimulating properties of our best grades of coffee, without any of their deleterious effects.

The immense territory in the West Indies and the Philippine Archipelago, which through the triumphs of our arms has recently been opened to a higher civilization and a more energetic progress, will yield a rich return in the products now confined to a limited area and daily becoming more important to the arts, the industries and the food of the world. Not alone the coffee in its various varieties, with or without caffeine, improved by culture, but the cinchona, the india rubber and many of our most valuable drugs, can be produced in a great abundance, and of as fine a quality in the territory now open or soon to be opened to our enterprises and industry, as in the narrow limit in which the produce has been confined.

Both Cuba and the Philippine Islands will undoubtedly in time form independent governments, but into both will have been introduced the energy, the enlightenment of that American nation, which broke the shackles of their slavery and their debasement, and rendered it possible for them to develop free institutions, and the general education of the people to develop the resources of a country the possibilities of which have no superior in the world.

FOREIGN vs. HOME CLINICAL STUDIES.

UNTIL within the past few years every medical student thought a course in some European hospital, notably Berlin or Vienna, was of so much importance that every effort was made to secure a six months' or a year's trip abroad. It is now generally admitted by the best educators in our profession that the facilities in this country for scientific and practical study in lecture room, laboratory and hospital, are quite equal, if not superior, in our own county, more especially in

large cities, to those offered abroad. Our hospitals are better conducted, asepsis more complete, and results better than in the famous hospitals of Europe.

Dr. Weber, one of the ablest surgeons in Ohio, now United States Consul at Nuremberg, says he believes our methods of teaching are superior to those pursued in Berlin, Paris, London or any of the great European cities. "A young man," he says, "goes to Europe to study, and he sees the wonderful work of some of the great operators in surgery. His head is filled with that sort of thing, and he comes back thinking these great operations are all there is to the science, yet the men who do these operations are often only skilled mechanics, and could not in the true sense of the word be considered great surgeons."

A young man, in this country, who has by a judicious preparatory training and a thoroughly scientific college course laid the foundation of his profession and then has had two or three years' experience in a hospital, goes out fitted for every kind of work. In process of time, after a longer or shorter period of general work, becoming thoroughly familiar with the reflex action of one organ or the other, and of the mind upon the whole organism, he can with safety drift into the specialty for which he feels himself best adapted, bringing into it a ripened judgment which he could not have obtained without the previous training in general practice. And yet foreign travel, a visit to the great institutions abroad, to those who can afford the expense, will always prove a pleasant recreation and perhaps enlarge the knowledge of minute scientific detail with its practical bearing upon the work of their profession, which seems to these profound scientists of an altogether secondary consideration.

"THE MURDER OF THE MODERN INNOCENTS."

NO one knows better than the physician the fact that our children are being murdered right and left by the modern method of cramming at school, and no class in society can do so much to prevent this wholesale slaughter as the body of medical men and women. Our attention was attracted to the subject by the perusal of an article with the above title in *The Ladies' Home Journal* for February, by that capable woman, Mrs. Lew Wallace, to whom the editor, Mr. Bok, had graciously given his own space. This article should be in the hands of every parent and every educator in the land, and it should be read and pondered well, for it contains truths clearly stated, without mincing, which affect the very foundation of society. The protest has already been made by many individual practitioners of medicine but without avail, because of the lack of sufficient influence or of pressure.

The subject should be taken up in various localities by medical societies of the highest standing, and placed in the hands of committees composed of the strongest men in the profession.

The murder of the innocents of the nineteenth century is done under what is called the finest free school system the world has ever possessed. But think of the sacrifice, and consider the fact that it is over-education that is doing it!

The tasks are too great, and the incentives and *stimuli* too enticing, for the young brain to balance, and before we know it the child is pallid with what is known as the "school complexion," the appetite has gone, there is little sleep, and our beautiful, rosy child that was, has become a complete wreck!

Who can put a stop to this terrible warfare upon our innocents? No one but the respected family physician, whose word is law, and who is bound to be obeyed when he insists upon a course to be followed in no uncertain tone. He must appreciate the outrage that is being committed before he can accomplish anything. We hear so often of children who are "studying too hard." The teacher says a child need not attempt a particular task which ambition urges it to accomplish, but it is allowed to go to its physical ruin. Who is to blame? The system which makes it possible!

Of the long suffering teachers, who is to protect them from heartless school boards, composed of petty politicians, or incompetent superintendents, perhaps old fossils who never should have been placed in such a position—an instance of which it is said exists in this city to-day— or the egotistic "Uriah Heep" who usurps many a position through political "pull," under the rotten conditions which generally prevail? The teachers certainly are to be commiserated, for their tasks are not easy. They are crowded with unnecessary duties, much as the pupils are, and if they do not submit to every unreasonable demand they are persecuted to the bitter end. Who will protect them?

With so estimable a man as Mr. Joseph J. Little as President of the Central Board, there ought to be great improvement in the conduct of school affairs. His attention should be called to the "cramming" process which is doing so much harm, and he ought to protect the teachers from the persecution which some of them have to undergo at the hands of the superintendents.

THE announcement of the death of Dr. Edwin M. Hale, of Chicago, January 15th, came as a startling surprise to the hosts of his professional

friends in this country and abroad. The illness was so short and the end so sudden and unexpected that we can scarcely realize that one of the most earnest and intelligent workers in the great field of therapeutics has finished his earthly labors and passed within the veil. The influence of Dr. Hale's work will long be felt in the profession for which he has done so much as author and teacher.

METHYLINE BLUE IN EPITHELIOMA.

M. LANDREWIC, of Toulouse, in speaking of therapeutic action of methyline blue, refers to its analgesic, anti-malarious and antiseptic properties. For many years we have been in the habit of administering this drug with great benefit in that form of malarial poisoning where the symptoms were not strongly marked, but characterized by lack of digestion, constipation and general weariness, with occasional exacerbations. M. Landrewic considers the special action of the drug to be upon neoplastic tissue, where it is specially adapted as an application in conjunction with curettage to cutaneous epithelioma. In recent cases the cure was rapid, and in older cases, with extensive destruction of tissue, he thinks it is preferable to the knife. Even if that is called for as a last resort, the previous application of the drug will prove of benefit.

A DELIGHTFUL CLIMATE.

DR. W. HANDFORD WHITE writes us that "the mean temperature at Santa Barbara, Cal., for December, 1898, was 55.4 degrees; that of the warmest day being 65, and of the coldest 50 degrees.

"The rainfall was only 0.36 for December, and for the season 3.67 inches. The mean relative humidity was 52 degrees. During December there were twenty-one clear days, five fair and five cloudy days. The prevailing wind was west. The peculiarities of December were the lightness of the rainfall, the extreme dryness of the air, and the freedom from high winds."

This is certainly a typical climate, and must be delightful to the healthy, as well as to the invalid. Our readers will do well to bear in mind that Dr. White may be consulted by persons desiring a health resort, whether invalids or not.

PURE BEER.

OUR legislators, especially the State, find it so comfortable at the State Capitol during the winter months that they often lengthen the sessions by legislation not needed, and which had much better be left alone.

What earthly necessity is there for legislating about "pure beer," defining its ingredients and how it should be made, when there is probably less adulteration in beer, as shown by chemical analysis, than in any other manufactured product.

This kind of investigation comes naturally under the Pure Food Act, and requires no additional legislation, much less a kind of legislation such as would be expected from an act which shows in its construction an entire absence of accurate knowledge of the principles upon which all beer is manufactured, and the part which is required of each ingredient.

Every year we see introduced some kind of legislation relating to the medical profession, public charities, especially denominational, which had much better be left alone, or placed on the table, never to be resurrected. There is such a thing as too much law. If our State Legislature would only hold a short session every two or three years the public would be greatly benefited. There would be less opportunity for airing individual fads, lumbering up law books with enactments of no public benefit, and more chance for the display of common sense and accurate information in laws really needed, not so much for separate individuals, as the common good.

THE FOOD SCANDAL.

THE evidence of a large amount of meat being furnished to the army in the recent war which was non-nutritious, decomposed and unfit for use, coming as it does, from a thousand different sources, is overwhelming. Tons of fluoride were shipped from New York to Chicago last summer.

Prof. Helborg, of the pharmacy department of the University of Illinois, bought one of the cans put up in Chicago, and sold openly, and on analyzing its contents found fluoride of ammonium and fluoride of sodium, and gave it as his opinion as a chemist that these substances might unite with the gastric juices to liberate hydrofluoric acid, which is one of the most powerful acids used in chemistry.

If this was the kind of food furnished to the army in part, even to meet an emergency, is it any wonder that the soldiers who partook of it sickened and died, and that others seeing the terrible effects upon those who partook, turned in disgust from the decomposing, nauseating mass? Was there any excuse for food like this being furnished, even to meet an emergency, or for officers cognizant of the facts not making it known?

History repeats itself, and the present controversy may prove another instance of the final establishment of the truth so clearly and emphatically as to bring out in strong light the real motives of those who sought to cover personal

errors and attach blame where only praise and commendation was due. The sure consequence of an attempt to degrade the commanding general of the army for disclosing what our soldiers have suffered through incompetency at least, will at no late day react with terrible force upon the men who seem to forget that the final verdict will be with a justice loving nation. If the administration is desirous of making General Miles a successful candidate at no late day for the Presidency, it cannot adopt a more certain method than in the criticism and action of some of its members.

Not the least of the far reaching results of the late war will be found in the reorganization of our army, rendered absolutely necessary by a universal national responsibility, which must include such a change in the conduct of the commissary and medical departments as will effectually close the door against a repetition of the abuses and errors of the past.

PREMATURE BURIAL.

A BILL to prevent premature burial has been introduced into the Legislature which provides that every cemetery, where the deaths are more than 100 annually, shall have a mortuary, well ventilated, the doors unlocked, where bodies can be kept a certain time. The bill also provides that the certificate of the physician must state whether or not all the following signs of death have been noted:

1. Permanent cessation of respiration and circulation. 2. Purple discoloration of the dependent parts of the body. 3. Absence of blistering around a part of the skin touched with a red hot iron. 4. Rigor mortis. 5. Signs of decomposition. No body shall be buried, cremated or otherwise disposed of before twelve hours shall have elapsed from the time of death, and before unequivocal signs of decomposition shall have appeared.

STERILITY.

ON the theory that sterility in the female is often the result of a hyperacidity of the vagina, which destroys the spermatozea, M. Troulette, a veterinary surgeon of Lyons, treated 436 mares which had been previously ineffectually covered, by means of vaginal douches containing 74 grammes of carbonate of soda in a quart of water. The douche was given an hour before copulation, and so far succeeded in counteracting the hyperacidity of the vaginal mucus that more than one-half of the whole number was fecundated.

The success of this experiment in the animal may possibly serve as a suggestion as to the cause of sterility in many cases in the human female, which may be used to advantage.

AN EXCELLENT IDEA.

A PROPOSITION is being considered in Toronto to establish an Academy of Medicine which will include all the other medical societies. The division of work into sections, each meeting once a month and the entire society once a month, would enable the work to be carried on systematically, insuring the best practical results. Such an organization in the city would do much for the profession and the public.

THE entire sewage of Exeter, England, is completely purified by means of the microbe, with no expense except the original outlay in building air-tight and light-tight tanks into which the sewage flows and where the microbe can swarm and do its work. The process is carried on automatically, and the product is said to be absolutely innocuous. This work has been going on for two years, so that the experimental stage seems to be over. If found to be practicable on a large scale, this is a wonderful advance in the treatment of an important question.

THE latest sectarian "fad," which is claimed to be "progressive Osteopathy," whatever that is, has been christened "Somatopathy," and it blossoms forth with that egotism and assurance which is born of ignorance and superstition. The prospectus which is sent to laymen—a copy of which we have before us—savors of humbuggery from start to finish. We will not quote the "stuff" it contains, for it is not worth the space, but if any reader cares to see for himself, he can easily get a copy, as they are freely issued. The picture of an enormous apartment house is presented, as if the "Home of Somatopathy" occupied the whole of it, which we do not presume to be the case. "The Institute of Somatopathy" announces four terms of five months each; $500 payable in advance and degrees will be given in "Somatopathy and Osteopathy. "Our students will be taught anatomy, physiology and pathology in the New York Homœopathic Medical College without extra charge to them." The proposed journal, etc., will be "sent free on application, to the sick and to prospective students." The "Somatopathist" has a creed like other sectarians, and they are all of equal consequence. "Somatopathy, advanced Osteopathy," is the definition of this new term as given in the prospectus.

The true *physician* has no creed, and the boundless universe is open to him.

We notice that the names of several respectable

physicians have been worked into this wonderful literature as if they were supporters of the new "fad," and it is strange that a medical college could be induced to lend itself to such an enterprise.

The scheme as presented in the prospectus has all the appearance of quack advertising.

The success of Mrs. Eddy, of "Christian Science" fame, in money making, will no doubt encourage many other schemes to humbug the people. We trust the medical profession will not be hoodwinked into endorsing any of them.

The estimation in which this sort of "fad" is held by the Tri-State Medical Association of Mississippi, Arkansas and Tennessee, may be seen by the following resolution, adopted at the annual meeting, held in Memphis, December 20-22, 1898:

WHEREAS, The medical laws of the various States have been so perverted by political influences as to give legislative sanction to grotesque, ignorant and dangerous sects of pretenders and charlatans, and

WHEREAS, The privileges granted to one of the most outrageous aberrations, namely, the so-called "Osteopathy," constitutes a disgrace to the States in which the "Osteopathists" are legally intrenched, and

WHEREAS, A certain William Smith, "Osteopathist," having been roundly denounced, together with his sect, by Parke, Davis & Co. and the *Medical Age*, now brings suit against both for $15,000 damages; therefore

Be it declared the sentiment of the Tri-State Medical Association, of Mississippi, Arkansas and Tennessee, that Parke, Davis & Co. and the *Medical Age* are entitled to the sympathy of its members and of all medical practitioners; that we wish and expect them to enjoy a complete triumph in repelling this legal assault; and that wheresoever a powerful house takes a bold stand in opposition to quackery it promotes the interests of legitimate and honorable medicine and the welfare of humanity.

DR. GEORGE H. SIMMONS, of Lincoln, Neb., editor of that excellent journal, the *Western Medical Review*, graduate of both Hahnemann Medical College and Rush Medical College, of Chicago, has been unanimously elected editor of the *Journal of the American Medical Association*. We congratulate the association upon its selection, and Dr. Simmons upon his success.

BIBLIOGRAPHICAL.

GRUNDRISS DER KINDERHEILKUNDE. Fuer Aerzte und Studierende von Prof. Dr. Carl Seitz. Vorstand der Kinderpoliklinik am Reisingerianum und Privatdocent an der Universitaet Muenchen. 478 pp. Berlin: S. Karger, publisher; Charitestrasse. 15. Berlin.

The writer in this compendium of diseases of children has sought to present in full clearness and conciseness a series of clinical pictures of the diseases of these little patients. This he has done in greater completeness than is usually met with in compendiums. For example, the section on diphtheria occupies seventeen pages, and beginning with general remarks, after the proper anatomical considerations, takes up the most general form, faucial diphtheria, with its characteristic clinical appearances. He then presents the nasal form, the septic variety, the influence of the process on the other different organs and tracts, with the usual complications. Laryngeal diphtheria is then considered, in its different manifestations and stages, with its complicating features. The course of the disease in general comes next, the important features, the diagnosis and the prognosis, the prophylaxis and finally, the treatment, in which latter section he is especially strong.

The work is divided into a general and special portion. In the first, the anatomico-physiological peculiarities of childhood, the nourishing and care, together with vaccination, as well as the methods of examining children, are presented. The special part occupying the greater portion of the work is devoted to the affections of the various systems and tracts of the organism. A useful little work for one who desires a compendium in German on this subject. F. H. P.

THE AMERICAN YEAR BOOK OF MEDICINE AND SURGERY. A yearly digest of scientific progress and authoritative opinion in all branches of medicine and surgery, drawn from journals, monographs and text-books of the leading American and foreign authors and investigators, under the general editorial charge of George M. Gould, M.D. Philadelphia: W. B. Saunders. 1899.

This volume is constructed on the same lines as those of its predecessor of last year, and, like that, will prove a valuable addition to every medical library. The selections and the abstracts are made from the entire field of medical literature, with excellent judgment, no important fact being omitted or exaggerated, but presented concisely and intelligently.

LECONS DE CLINIQUE MEDICALE. Faites a l'Hopital Saint-Eloi de Montpellier. Novembre, 1895, a Mars, 1898. Troisieme Serie par le Dr. J. Garsset, Professeur de Clinique Medicale a l'Universite de Montpellier, etc. etc. Avec 20 planches dont 10 en couleur et 6 en phototypie 821 pp. Camille Coulet, publisher, Montpellier, France. Bound in paper. 1898.

This volume, by the eminent clinician of Montpellier, France, Professor J. Grasset, completes the record of his first twelve years of clinical teaching. The nervous system occupies the first rank in these lectures. General clinical anatomy predominates in the work, and he discusses many diseases of the nervous system, with his conception of the diseases of the nerves, spinal cord and brain, a conception quite different from that of the anatomist, and he demonstrates how useful it would be to write today a manual of the general clinical anatomy of the nervous system, prepared and conceived in this manner. The lectures are twenty in number. They are very scientific, accompanied by excellent colored plates and photogravures. The one on aphasia is very complete; that on psychological automatism is interesting in explaining the flights of those who "drop out of sight" in the world for a time. Those on multiple and disseminated sclerosis of the nervous system are filled with illustrative cases. A lecture on the clinical semeiology of vision is also interesting. Another instructive chapter is on aphasia of the right hand in a deaf and dumb person. A case of living skeleton is described, and accompanied with comparative photographs. Several other clinical cases are also studied, as a case of pneumococcia with rose-spots, where the serodiagnosis was negative; a case of intestinal perforation in typhus saltatorius; a case of mitral disease and one of cardiac hypertrophy. The initial lectures are a historical presentation of the gradual development of antiphlogistic medication and its standing before modern ideas and anti-infectious medical therapy. Prof. Brasset has been a prolific writer. He has recently written a manual of diseases of the nervous system which, like all his works, occupies a high place in French medicine. His works can only be appreciated by a neurologist. F. H. P.

LEZIONI CLINICHE SULLE MALATTIE DEL SISTEMA NERVOSO dette al l'Ospedale dei paralitici e degli epilettici in Londra. Sir W. R. Gowers, M.D., F.R.S., Medico del l'Ospedale, Consulente del l'Universita, gia professore di clinica medica. Traduzione del Dott. C. Tamburini. Seria prima. 179 pp. Published by La Societa Editrice Libraria, Milan, Italy, via Disciplini, 15. Bound in paper. 1898.

This work is a collection of lectures, twenty in number, delivered by Professor Gowers, the well-known English neurologist at the National Hospital for Paralytics and Epileptics in London, England, which has been translated into very good Italian by Dr. C. Tamburini. Gowers is indisputedly one of the greatest of living neurologists, and the sober and practical manner, with the clinical inclination of his works and their simultaneous fullness, render his writings of value. These clinical lectures are replete with useful thoughts. His first, on the general principles of the diagnosis of nervous diseases, is particularly broad and helpful. Another very instructive one is that on syphilitic hemiplegia. Two are given on tabes; two on the causes of epilepsy in children, which are characteristically valuable. The paralysis and locomotor ataxia of lead-poisoning occupy two separate other sections, while two more on optic neuritis, both the mild and the severe forms, terminate the work. These lectures have been gathered from different journals through which they were scattered. Still more are to be issued in the same manner and by the same publishing house. Whatever Professor Gowers writes is of a high order and decidedly instructive. His work on "Diseases of the Nervous System," in three volumes, as well as his "Manual of the Clinical Diagnosis of Diseases by Examination of the Eye," have both been turned into Italian by the same translator. The language of the Italian version is almost classical.

F. H. P.

The Ladies' Home Journal opens the New Year with a fresh galaxy of writers, and each issue vies with its predecessor in the race for superiority.

In the February number, we specially note Mrs. Ballington Booth's experience, "Through the Prisons," so charmingly told, and "The Murder of the Modern Innocents," by Mrs. Lew Wallace.

The article of Mrs. Wallace should be read by every parent, as well as by every educator. This is a good clean journal, and worthy a place in every household.

The International Magazine, heretofore published in Philadelphia, will hereafter issue from the house of E. B. Treat & Co., of this city. Dr. Boardman Reed will continue as editor, and he is a good one.

Thus one after another of the Quaker City publications are coming to the Mecca of journalism. We extend our best wishes to the *International*, and "may it live long and prosper."

A COMPEND OF HUMAN PHYSIOLOGY. Especially Adapted for the Use of Medical Students. By Albert P. Brubaker, A.M., M.D., Adjunct Professor of Physiology and Hygiene in the Jefferson Medical College; Professor of Physiology in the Pennsylvania College of Dental Surgery; Lecturer on Anatomy and Physiology in the Drexel Institute of Art, Science and Industry; Fellow of the College of Physicians of Philadelphia. Ninth edition, revised and enlarged. With new illustrations and a table of physiologic constants. Philadelphia: P. Blakiston's Son & Co., 1899. pp. 266. 12mo. Price 80 cents.

The continued demand for this useful little book has made a revision of the text possible. It has evidently met the wants of the student class, judging from the rapidity with which the editions have been exhausted. There can be no question as to its value.

E. B. Treat & Co. announce as in press their "International Medical Annual" for 1899. The "Annual" has been published every year since 1889, and has been conducted with such excellent judgment that it has become so much of a favorite with the profession that in almost every case a subscription once commenced is continued from year to year, the price being so low as to place it within the reach of all.

A TREATISE ON FRACTURES AND DISLOCATIONS. For Practitioners and Students. By Lewis A. Stimson, B.A., M.D., Professor of Surgery in Cornell University Medical College, New York. In one octavo volume of 823 pages, with 321 engravings and twenty full-page plates. Cloth, $5.00 net. Leather, $6.00 net. Lea Brothers & Co., Philadelphia and New York.

This work is really a revised edition of the author's two-volume book, now out of print.

The eminent author has boiled down his most comprehensive experience into a form adapted to the requirements of the student and practitioner, as well as for reference of the surgeon. The bibliography will be found of great value. The usual historical matter has given way to settled opinions, which will be found of greater practical service.

The illustrations are particularly fine, including the instructive X-ray plates.

The volume deserves a place beside Hamilton's classic work on the same subject.

THE COMING AGE. With the motto "A Magazine with a Mission," edited by the founder of the *Arena*, a wideawake, progressive newspaper, will publish in its April number an article by Prof. John Iric Lloyd, entitled, "Do Physicians and Druggists Live on the Misfortunes of Humanity?" Our readers cannot fail to be interested in the subject. Price, 20 cents. Published at 506 Olive street, St. Louis, Mo.

HOSPITAL REPORTS.

PRACTICAL NOTES FROM THE HOSPITALS.

THE TREATMENT OF GASTRIC ULCER.

In order to determine more positively the presence of an ulcer some authorities advise the withdrawal of the stomach contents to test for hydrochloric acid—others think it unwise, on the other hand to introduce a stomach tube for fear of causing hemorrhage, or possibly perforation of the stomach. In many cases the history is clear enough, so that we may safely make a diagnosis of gastric ulcer. This bring up the question of the proper treatment for such a condition.

The most popular drugs with the profession to-day are silver nitrate and hyoscyamus. Beyond these the most important part of the treatment is dietetics. If there are marked symptoms and the vomiting is great, stop food by the mouth absolutely for a week or ten days. When feeding by the rectum give peptonized eggs and milk. Nearly fill a pint bottle with milk, put in the pepsin tablets and set the bottle in warm water at a temperature of one hundred and one or two. Let it remain until the milk is thoroughly peptonized.

To allay thirst a little water may be given from time to time, but do not give the patient ice to suck. In this way a great deal more may be taken than is good for the patient or is suspected. And the thirst is generally greater after the ice has left the mouth than it was before. As to the beneficial effect upon the stomach claimed from the use of ice, I cannot see where it lies. Ice dissolved in the mouth can do no good, and even if chunks were swallowed its good effect would be very questionable. Where the vomiting is severe and the hemorrhage such that absolutely nothing should be allowed to enter the stomach, thirst should be allayed by hypodermoclysis; a cloth wet with water and glycerine may be held in the mouth to prevent its dryness.

Of the other methods of treatment one that is in great favor with the advocates of hydrotherapy will be used in this case in addition to the silver nitrate and hyoscyamus. That is the applying of a cold compress to the epigastrium. This is of value in hemorrhage in these cases, the same as when used elsewhere. However, as I prefer to use it, it is not a cold compress in the true true sense of the word. Several layers of lint are placed in cold water and then wrung out just enough to prevent dripping and this is tied on with a binder. This is done twice in twenty-four hours. The lint becomes heated in a short time and really acts as a poultice. Just how it does good cannot be said, but perhaps the contrast between

the cold and warmth influences digestion. Many cases in Germany have been cured by using only this plan and paying strict attention to dietetics.

A method lately suggested in place of the use of silver nitrate is the use of massive doses of bismuth. A tube is introduced just to the cardiac orifice and from sixty to 100 grains of bismuth, mixed with water or mucilage of acacia, is poured in. The large dose is for the purpose of having the drug spread over the whole surface of the stomach. This treatment could be used for only a week or two on account of the large doses of the drug used.

The epigastric pain is generally relieved by the hyoscyamus and the compresses. If it is severe a hypodermic of morphia may be given. One or two minims of dilute hydrocyanic acid, combined with five grains of bismuth, has also given good results. Three to five minim doses of the fluid extract of cannabis indica is highly recommended by some, but my experience with this has been that it acts as a hepatic stimulant and makes the patient outrageously hungry.

A stimulant that is very seldom needed in this disease, but one which is very popular with the profession in these days, is strychnine. This drug is like a sharp lash to a whip and is to be used only in cases of emergency. It is indicated when the patient is in such a condition that one terrific struggle must be made to pull him out and start him on the road to recovery. The condition is like that of a team of horses pulling a heavy load which come to a soft place and are in danger of stalling. The driver, knowing that one great effort must be made to get the load on solid ground, plies the whip and gets every possible effort from his team for a few seconds and the crisis is passed. There is nothing in strychnine that does good if it is given two or three times a day, week in and week out. Use it when in a low place and then stop. This applies to other diseases as well as to typhoid fever. There is one other objection to its use in typhoid fever and that is that the nervous system responds very readily to its action. The temperature is apt to be irregular from its irritant effect on the centers of heat production and heat dissipation. In some cases also twitching of the muscles is induced. I have seen cases in which this was taken to be subsultus and still more strychnine given to counteract it.

In speaking of the use of whiskey in typhoid fever I mentioned a case where the whiskey was cut down from eight to four ounces per day because the full sounding pulse of the patient indicated that he was using more strength than was needed. I wish now to speak of a case in the hospital where the use of whiskey was very beneficial, although increased amounts were used only as a necessity. The case is that of a young man extremely low with typhoid fever. When I saw him he had marked coma vigil, with subsultus, and a very weak heart. His whole condition was one of the worst that I have seen. He was then getting eight ounces of whiskey a day. As almost a last resort this was increased to twelve ounces. The effect was very good, with the result that in a few days his condition was so much better that the whiskey was reduced to ten ounces and then to eight. When this was done he was perfectly conscious and quiet. The next day the tossing and delirium had returned to some degree, caused, I believe, by the reduction in the amount of whiskey, as the return to ten ounces again cleared up these symptoms.

A. G. E.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.

SURGICAL SOCIETY.

Vesical Tuberculosis.—M. Pousson, Bordeaux, has for a long time used the oil of iodoform vaseline by instillation in the treatment of vesical tuberculosis. A solution of 5 grammes of idoform in 100 of the oil of vaseline, or olive oil, and of this 10 to 15 centimetres, cubic, is injected every day or second day.

Treatment of Cerebellar Abscess.—These suppurations, studied for many years by Fenier, Nignon, Subet-Barbon, Grunert and Paul Koch, are divided into extradural and intradural, and the latter into peri-cerebellar and intracerebellar; they may be combined. The extradural abscess, which comes from suppuration of the ear, of the cerebellum on the posterior face of the petrous bone, or interior of the mastoid, more frequent in men than women, and in the posterior than middle cranium, are of variable volume and accompanied with external pachymeningitis, pus and fungosities. Clinically, there are observed pains in the head, continuous or intermittent, in occipital region, vertigo, nausea, somnolency, epileptiform spasms, slow pulse —diagnosis difficult from abscess located in the brain. Intradural pericerebellar abscess is rare, may be circumscribed or diffused, and cause vague symptoms of irritation. Intracerebellar abscess, antero-internal or external, of the median line, usually unique, of variable volume, may extend in different directions, causing numerous collections, may coincide with lesions of the meninges and petrous bone, with otitis of the middle ear, acute or chronic, and with lesions of the lateral sinus. As respects pathogenesis, the point of departure of these abscesses is a necrosis of the labyrinth or neighboring portion of the mastoid, or of the sigmoid fissure. Diagnosis of cerebellar collection made, intervention becomes necessary; numerous methods are advised. Wheeler recommends the partial mastoid method for intracerebellar abscess. While it gives good results it is narrow and perilous, and does not allow evacuation of antero-internal collections. The occipital is another method, but the total mastoid-transmastoid of Nignon is preferable, but by this only the antero-internal and external collections are accessible, and not the posterio-internal. The occipital method, advised by Acland, Ballance, Bryant, is too posterior to reach the anterior lesions. After a series of experiments, M. Picque advises occipito-mastoid craniectomy, which supplies the desiderata wanting in the other methods.

Uretro Prostatic Calculi.—M. Rousseau discovered by catheterism a prostatic calculus, which was removed by perineal operation, some time after there was a purulent discharge from the urethra, and a urethral calculus was revealed by catheterism and removed. In another case there was a calculus in the upper part of the prostatic region. After failure of efforts of extraction the hypogastric operation was performed. The calculus was partly in the bladder and in the urethra; it was formed like an hourglass. A serious secondary hemorrhage occurred on the tenth day.

MEDICAL SOCIETY OF THE HOSPITALS.

Cerebro-Spinal Meningitis.—MM. Chautemesse and Millet reported a case of above disease, with bacteriological examination, observed during an epidemic. In the pus a microbe was found, differing from the pneumococcus of Talamon and the intra-cellular meningococcus of Weichselbaum. It could not be regarded as the former, merely attenuated, as its pathogenic properties and peculiarities of culture in gelatine and serum of the rabbit distinguished it. If, on the other hand, it resembled in certain respects the intracellular diplococcus of Weichselbaum, it differed in form and in its required presence in leucocytes, its culture in gelatine, bouillon, and its coloration by Gram's method.

Distinction Between the Meningococcus and the Pneumococcus by Culture in Serums.—MM. Bezancon and Griffon.—Culture of the pneumococcus in the serum of the rabbit distinguishes it from other microbic forms that may resemble it. It develops itself in the form of encapsulated diplococci, uniformly disseminated through the preparation when a drop of the culture is put under the microscope. As the meningococcus presented many characters in common with the pneumococcus, it was suggested to apply this method of diagnosis to the microbe of cerebro-spinal meningitis. This we have been able to do by two specimens of meningococci placed at our disposal. When cultivated in the serum of the young rabbit, the meningococcus developed less abundantly than the pneumococcus, but there was spontaneous agglutination especially, and instead of presenting diplococcic forms, it became agglutinated into chains and masses. This peculiarity was also observed when the meningococcus was cultivated in the serum of human blood. The serum of a patient with pneumococcic infection is alone endowed with the property of agglomerating the pneumococcus; it agglutinates the meningococcus also, but this microbe undergoing the same action from the serum of human blood the reaction loses all its specific quality. The meningococcus also possesses the property of forming colonies in gelatine at a temperature

of 22 degrees, which is never observed in the pneumoccus. By all these characters, and by its much greater vitality, the microbe under consideration is very clearly distinguished from the common pneumococcus.

General Staphylococcic Infection of Urethral Origin.—M. Rendu.—A subject of twenty years was taken with grave symptoms resembling typhoid fever, and meningitis also, forty-eight hours after infection from an unclean sound. For five days hyperthermia (40°.6) was the most prominent symptom. Numerous abscesses supervened, thirty-eight in the space of a month, located in the subdermic and subaponeurotic tissues and the muscles; they were indolent as those from purulent infection. The viscera were also affected (slight endocarditis and hemorrhagic nephitis), but with perfect permeability of the kidneys. Under the influence of a rigid milk diet an eliminating polyuria of the toxines was established; patient cured in two months. Treatment consisted of baths, lotions, milk regimen, and tannin to control the hemorrhagic nephritis.

Case of Segmentary Oedema.—MM. Chauffard and Leviate-Dreux presented a case of the above in a woman of forty-six years. The oedema was more gelatiniform than serous, recurring for the third time in the left arm, constricted by a circular band of long duration, and occurring without local cause; patient albuminuric, with latent renal lesion and a moderate morphine maniac. Was it a segmentary myxoedema, and could the thyroid treatment have been prudently resorted to? The oedema began after the suppression of a large cauterization, which had been actively maintained for five years. The pathogenesis was no less obscure.

FRENCH SOCIETY OF DERMATOLOGY AND SYPHILIGRAPHY.

Treatment of Cheloid by Injections of Creosote Oil.—MM. Balzer and Mousseaux.—The frequency of relapse of cheloid after surgical removal is well known. In a young girl of sixteen, strumous, and whose father died of tuberculosis, a tumor existed upon the lobe of the left ear, of the size of a hen's egg, and occupying the whole maxillary region, reddish brown in color, and of elastic consistence; had been extirpated three years before and returned larger than ever; another appeared at the angle of the jaw. Diagnosis, tubercular cheloid. Began with injections of creosote oil, 20 per cent., one cubic centimeter; punctures made at different points; portion of injection escaped each time because of density of tissue; pain slight. Very active inflammation with swelling next day, soon followed by elimination by portion of cheloid tissue and very deep ulceration, disappearing in a few days, and leaving cicatrix scarcely visible. M. Brocq obtained complete obliteration of cheloid by effect of pulverization of the sulphur waters of Luchon. In ordinary cases he employed scarifications, electrolysis, and chrysophanic acid. Are there not great differences in the nature of cheloids, since they are made to disappear by methods as opposite as massage and others?

Permeability of Vasa Deferentia in Old Double Orchitis.—M. Morel Lavallee.—Two observations indicat the return of permeability of the canals in subjects with double orchitis, as proved by the reappearance of genital power: the opinion that condemns these subjects to permanent sterility must be abandoned.

BIOLOGICAL SOCIETY.

Resistance of Serous Membranes to Some Infectious Agents.—MM. Auché and Charannaz, Bordeaux.—Experiments yield the following results: First: Animals that have received the colibacillus in the meninges die in less than twenty-four hours. In all cases the microbes are found in the cranial and rachidian meninges, and except in one case, the blood has yielded pure cultures of the colibacillus. Second: Animals inoculated with the same colibacillus in the pleura and peritoneum have resisted, in spite of very much larger injections into serous membranes. Third: Subdural injection of the staphylococcus aureus, in a series of experiments, caused death in forty-eight hours, while the intraperitoneal did not destroy life Fourth: Other animals have presented no symptoms when trepanned and injected with the same quality of sterile bouillon. Fifth: Resistance of the meninges is then much weaker than that of the pleura and peritoneum, and to obtain a positive result it is necessary that the virulence of the infectious agents should be very great, as demonstrated by the survival of all the animals. In a practical view this defeat of resistance of the cranial meninges to infection explains, in part, the gravity of surgical interference, in the course of which the dura mater is incised, and particularly if one reflects that surgical wounds are rarely aseptic.

FRENCH SOCIETY OF HYGIENE-HELIOTHERAPY.

M. Apery, of Constantinople, proposes a new therapeutic method of cauterization, which is the concentration of solar rays by means of a convergent lens, and the formation of a calorific and luminous focus. This form of cauterization can reach parts to which the pencil of nitrate of silver and the thermocautery cannot penetrate, and, moreover, the impression upon the patient is much less painful.

The Prevention of Lead Poisoning Among the Industries.—MM. Ferdinand Jean and Bruhat communicated to the Society a letter from a manufacturer of accumulators, who had among his operatives numerous cases of lead poisoning, and who claimed to remedy this painful trouble. It is necessary, in the first instance, to ascertain the presence and quantity of the dust of lead in the air. This can be done by an extremely sensitive reaction discovered by M. Guillot, and named "Tetramethyldiamidophenylmethanhydrol." This body assumes a blue color in the presence of the least trace of the bioxide of lead.

J. A. C.

TREATMENT OF MYCOSIS.*

By W. O. Bailey, M.D., Louisville, Ky.

I desire to ask the advice of the Society in regard to the treatment of a case under my care at the present time. It is a case of pharyngeal inflammation, which resembles follicular tonsilitis, there being numerous spots or follicles visible about the pharynx, especially its posterior wall. I assume the condition properly comes under the head of mycosis, and the point I wish to inquire about particularly is the best method of treatment.

Dr. T. C. Evans: I have seen quite a number of cases of mycosis, notwithstanding most of the modern text books say it is an exceedingly rare disease. In this part of the country, at least, it cannot be classed as rare. I have seen twelve or fifteen cases a year in the limited number of patients that I see. I doubt not those who have a proportionately larger practice have seen a relatively greater number of such cases. The disease is ordinarily such a mild one, and creates so little disturbance, that I believe the larger number of such patients never go to the physician for the relief of this disease, but it is discovered when they apply to the physician for some other reason.

The best method of treatment, so far as I am advised, is to make free use of the galvano-cautery, going down into each one of these little mycotic growths which grow out of the small follicles on the base of the tongue, upon the surface of the pharynx and tonsils. Probably those most difficult to treat are the ones appearing about the base of the tongue; so long as only the pharynx, the tonsils or pillars of the fauces are involved there is little or no trouble in reaching them with the galvano-cautery and destroying them. Usually, one cauterization of a growth is sufficient to completely destroy it. In some cases there are many hundreds of these little growths, and as only ten or twelve can be cauterized at one sitting the treatment may have to be prolonged over many months. Not more than this can be destroyed at one time, on account of the reaction following each cauterization.

The only way is to begin on one side and destroy the little growths completely, as far as you go, and even then you may find later that you will have to go back over the surface and touch those that were overlooked.

So far as I have been able to ascertain the galvano-cautery is the only specific that we have for this trouble.

Dr. T. E. Converse: An admirable way of treating these cases is to pick up each follicle and clip it off with scissors. This plan is being advocated at the present time instead of the cautery. You do not get the same amount of reaction, pain or discomfort by use of the scissors that you do in the use of the cautery. The scissors are especially reccommended in those cases where you have only a few deposits; this method is less painful to the patient and is just as efficacious. I have used the scissors, but

*Reported to the Louisville Ophthalmological and Otological Society.

have never employed the cautery for this purpose. Treatment by means of scissors was suggested to me while in New York three years ago, I think by Doctor Myles. I have treated several cases by this method with complete success.

Dr. I. Lederman:

During my recent visit to New York I saw a case of mycosis affecting the base of the tongue, in the service of Doctor Myles. And by the way this is considered one of the rare locations for the disease to make its appearance. In this case Doctor Myles used electricity (electrocautery) and made the statement that the only manner in which such cases can be permanently cured was by complete destruction of the follicles, no matter by what means it was accomplished.

CORRESPONDENCE.

THE MODERN TREATMENT OF CROUPOUS PNEUMONIA.

Owing to the modifications produced by previous diseases with which it is associated, that it is frequent in alcoholics, etc., no statistics can be given of the value of different methods of treatment in cases of croupous pneumonia. The seed may be the same, but the soil in which it is placed is of the widest diversity and the results must be varied. By common consent a vigilant expectancy is recognized as perhaps the best method of treatment.

Bleeding as a rule is not regarded as good modern therapeutics, but it must be remembered that at times this measure will do good and is even necessary. This procedure is indicated when there is sudden engorgement of the heart and pulmonary congestion early in the attack, or when there is great difficulty in breathing, accompanied by a full, hard pulse. In these cases no hesitation should be felt in letting sixteen or eighteen ounces of blood. Good results will be obtained where smaller amounts would produce no effect.

The pneumonia will take its ordinary course after this, so the importance of venesection is not so great in influencing the course of the disease as it is in relieving the urgent symptoms. Among the preparations used in the past, and which we name only to mention as useless, are antimony, veratrum viride, and aconite. So long as the disease was regarded only as an inflammation there was some justification for the use of these drugs. In these days they are abandoned by those who recognize the disease as an infectious process, and prefer not to add to its effect by the use of perturbating drugs. In the same way digitalis should never be used as a routine practice, but only when there is a rapid and flagging pulse.

Efforts for antiseptic or germicide treatment are not a success. There is every reason to believe that the germ has done its work when the exudation is poured out sufficiently to be recognized. If this be the case antiseptics are useless after the recognition. Again, germicidal drugs will not operate when given by inhalation or ingestion, because the host is less resistant to their action than are the germs. Hence sufficient strength cannot be used to destroy the specific cause of the disease.

In pursuing the expectant plan of treatment the hygiene of the sick room should be well regarded. It should be well lighted and ventilated. Statistics of army cases, etc., show that better results are obtained when they are treated in the open air or in tents than when in close rooms. The bed clothing should be light, or just sufficient to make the patient comfortable. The common fever foods should be given, sparingly early in the course, freely later; a laxative should be given early, and if a tendency to constipation appears during the attack it should be repeated. The fever is of comparatively short duration, and antipyretic drugs are usually not required. Cold sponging is often efficient in regulating the temperature. This should be done night and morning in all cases. Systematic cold bathing has not given as good results as had been expected of this plan. However, in cases where the patient is soporose or the delirium is great, a five-minute bath occasionally is good treatment, and will be found to give good results.

The ordinary analgesics are only indicated where the patient is greatly disturbed and under much excitement. Even then they should be given in small doses, as they are to be used as much for their sedative effect as for their antipyretic influence, and in view of this should not be used throughout the attack or in large doses. In the same way the use of guiacol gives results that fail to justify the expectations raised in regard to this drug. Any drug that lowers the temperature several degrees, perhaps leaving the patient with a weak heart and free perspiration, must exercise a profound perturbation upon the processes of the body, and must add to the toxic effect already produced by the disease. I am opposed to such treatment, and as the course of the disease is comparatively short, the temperature may to a great degree be disregarded. In this connection it may be said that pseudo-crises when they occur may be very misleading, and cause an erroneous opinion as to the value of the drugs given for the purpose of reducing the temperature.

Pain in the chest and mental apprehension as to the result of the disease are two very common symptoms; the latter, in my experience, is one of the most important to be looked after. For this reason, as well as for the pain, Dover's powder is of very great value. It should be given in the dose of three to five grains every three or four hours, or until the patient is relieved of the pain and a light somnolence is induced. Ice bags should be applied to the affected parts, or, as some prefer, turpentine stupes. Cotton jackets should not be worn, but a simple woolen undershirt is better in every way. Blisters should not be applied early in the attack, as they only add to the discomfort of the patient and interfere with examination. When the pain has ceased the Dover's powder is discontinued and aromatic spirits of ammonia or ammonium chloride is given for its stimulating and expectorant influence. Alcohol should be given in small amounts from the beginning, and, if necessary, be used freely. Black coffee is also good as a stimulant. Ether and camphor may be indicated and also strychnine; the latter may be used in the amount of one-twelfth to one-seventh of a grain in twenty-four hours. It is doubtful if it is wise to go beyond the latter amount. For the relief of sleeplessness chloral is best in the early stages, but later, when there is a tendency to failing circulation, sulphonal is better.

Oxygen inhalations may be practiced. There is a question as to the value of this among practitioners. So often have I seen cyanosis disappear, sleep come to a restless patient, and the respiration fall four, eight, or ten to the minute, that I think the oxygen is of value. If resolution be delayed blisters may be applied, and these should be in the form of a number of small ones. Instead of these, light touches of the Paquelin cautery may be substituted. If there is great tendency to collapse or cardiac asthma present a hypodermoclysis of a litre of normal salt solution should be given, introduced in three or four punctures. In conclusion, the amount of fluid taken should be large. Plenty of water, a little at a time, should be supplied the patient, this having a good effect in helping eliminate the toxins from the body.

A. G. ELLIS, M. D.

Philadelphia, February, 1899.

IS THE TERM PUTRID INFECTION SCIENTIFIC?

A paper by Dr. C. B. Newton, in the *Journal of the Amer. Med. Assoc.*, Dec. 24, 1898, concerning autoinfection and pathogenic physiology, seems to me very valuable as well as interesting. It is perhaps one of the faults of modern medical men to regard as of inferior value the teachings of the professors of thirty years ago. It was my privilege to translate the conclusions concerning typhoid fever by my old friend and preceptor, Von Gietl, of Munich. His description of typhoid fever has more than once provoked a kindly smile from men who felt assured that the present day theories are quite sufficient. This paper of Dr. Newton should convince some bacteriologists that they do not entirely cover the ground with their up to date theories, and that some medical men of even a century ago knew something of cause and effect. Referring to antisepsis, and reviewing the work of Lister and of other surgeons, he very justly declares that "Absolute cleanliness is where we are to-day in the evolution of antisepsis." Referring to the various treatments of typhoid, he states that the popular theory is that all pathologic conditions have "origin in bacilli from without. May not toxic organisms result primarily from de-

composition of tissues, the warmth and moisture of the body becoming a medium, causing by their presence in the blood an auto-infection from the diseased organ, thus distinguishing from germs causing disease?" This recalls the definition of Von Gietl that typhoid fever (Typhus abdominales enterischen-typhus) is an intoxications krankheit; that it is a putrid infection—in various degrees of intensity—and that the external causes can be conveyed through air as well as by water. Some will call to mind the outbreak on the U. S. training ship New Hampshire. The Secretary of the Navy had directed that the ship be removed from its anchorage in the mud, with tons and tons of decaying animal and vegetable matter, including excrement, about its bows, to "blue water," but his suggestions had been disregarded, and typhoid fever broke out fatally among the crew. At night they slept with open ports, and at low tide the stench was disagreeable. The surgeon did not care to recognize the obvious cause of the fever, but declared that some one had brought over the gangplank a specimen of the bacillus typhosus, and this microbe had begun his devasting career, perhaps encouraged by the foul odors. The fact that children playing at the mouth of a sewer contract typhoid does not alter the theory of the bacillus typhosus being the sole cause, nor does anything avail with those who consider modern theories; all this is accessory in the chain of evidence. One surgeon in the navy, a friend of mine, having read my article in the *Record*, wrote to me that while it interested him I must not expect to convince him that bad smells could produce disease; and yet as absurd as this theory may seem to many, it is something like the truth, that foul odors are powerful factors. One point worth mentioning in the causation of typhus abdom, in Munich, can hardly be appreciated by those who have not lived in rooms in the apartment houses of that city. The privy is a peculiar cabinet, one or more upon each floor, the tube from each leading to a large shaft, which terminates in an enormous cesspool. Neither tube nor shaft is trapped, and the odor is so foul it seems impossible to remain long enough within the privy to attend to any call of nature. The entry is filled with the stench, and every room suffers more or less, but the room next to the privy is simply insufferable, and it was of this particular room Von Gietl had a horror, and he inquired of every new case of typhoid coming to the general hospital in Munich, Was your room next to the "abtritt" (privy)? And often I have heard the answer "Yes." Breathing this foul odor through the long night and through weeks and months rendered the person intoxicated with the excrementitious odor until putridly infected he sank sick with typhoid, and the post mortem examinations which I have attended of these patients have revealed many perforations, large and small, of the intestines. In our own hospitals I have seen patients struggling to recover from typhoid, when the air was so foul with excrementitious odors I could hardly remain long enough for the sick call, and nothing was being done to remove such an obvious poison. Referring to the death rate in New York from August 9th to 14th, 1896, during the terrible heat, Dr. Newton states that "it was estimated that 1,000 persons died directly from its effects, and that the deaths of as many more were caused by it among infants and children from the intestinal poisoning found in these little patients. Cholera itself would not in the same time have caused such destruction of life as did the foul, overheated air, poisoning to death so many hundreds. When the north wind came, invigorating with its ozone, the disaster was checked. Dr. Newton goes on to say: "Am I speaking disrespectfully of the microbic family when I say that as an exterior bacterial cause they were not in it?" They were surely at the demise of tissue and disposed of the remains. The question is, Were they present there as a primary cause, or was death the result of "retrograde metamorphosis—the decay and dissolution of the organic tissues, and of the blood from active hyperemia of the brain, induced by the insupportable heat of the sun's rays?" Professor Bouchard has stated very clearly, after his experiments, that the organism in its normal, as in its pathologic state, is a receptacle and a laboratory of poisons. The bacteriologists have given the pendulum violent motion, and the profession has been attracted by the interesting developments, but wisdom is not yet complete, and the learning of past generations of our ancestors in medical science contain truths worth clinging to. The professional anarchist and nihilist is at work not only for the glory of medical science, but for his own personal ends. The strong men of our profession are conservative, patient and thoughtful. They have heard of startling discoveries before; they have gone through such epidemics as that of Koch's tuberculin, and the storms have not "blown away their brains."

W. T. PARKER, M. D.

Westboro, Mass., January 27, 1899.

NOSTALGIA AND DEPRESSION.

"The bravest are the tenderest." I have seen this statement verified time and again upon what was twenty years ago our "frontier," and I have seen brave men die, far away from what ought to have been their homes, because their hearts were broken. Within a few days I have read in one of our medical journals of a laceration of the human heart from base to apex. Such cases are rare, and so far have only been observable in men. The *Boston Herald* of August 1, 1898, contained the following notice:

"One of the most pathetic incidents of the war is the account of a death from homesickness of a member of the Second Massachusetts Regiment. He was brought up quietly on a farm in one of the secluded towns of the State, and he so yearned for the scenes he had left that physicians say it literally broke his heart." This cause of death was reported again in another member of the same regiment only three days later, and then from every regiment cases were reported, until "nostalgia" became well known. The definition of the term is worth quoting: "Nostalgia, a journey home, pain, homesickness; an affection produced by the desire of returning to one's country, characterized by melancholia and sometimes by death." —Dunglison. This disease does not seek the worthless and the shiftless so often as the bravest and best. The courage does not forsake the sufferer so far as foes and dangers are concerned, but in his own unhappy thoughts he sinks like a man drowning beyond possibility of rescue.

Those who have read the pathetic recital of the sufferings of the members of the Greeley expedition, the lonely winter nights in the Arctic, and the tragic days of June, 1884, will understand why brave men like Greeley and his heroic companions gave way more or less to the depression of nostalgia. It is also a great satisfaction to read of Captain Schley's heroic rescue of these brave men, and to note the sympathy which came from the sturdy rescuers when they beheld the pitiable sufferings of Greeley and his four surviving companions.

In New England the dark, dreary days of winter, more particularly those of December, often try the spirits of those who seem well to do. In the country settlements the short, lowering days, with the long hours of darkness, make havoc with hope and fortitude. An editorial in a recent number of *Outlook* concerning dark days and stormy weather, contains much which should be of interest to physicians. "There are a great many days at sea in which it is impossible by observations to determine the position of the ship. The sky, to which the sailor looks for guidance, is blotted out, and he sails by dead reckoning. The charts are useless unless the position of the ship can be determined. In like manner the life of man is a pathless waste without the light of heaven. The clouds that gather about the spirit rise out of a man's life as the clouds which cover the sky rise from the earth. They often have their origin in physical conditions, but while they last they seem to be of the permanent order of things.

"There are a great many dreary days in winter in which it seems quite impossible to determine our own position or even the course we would sail, or the haven where we would be.

"General Greeley, in his Arctic experiences, with all his splendid courage, staggered under the crushing weight of dark, gloomy days. When the sun no longer gave its sublime, life-giving light, the flower of courage refused to live, and one by one men of heroism sank down to death." Absence of sunlight kills many every winter in New England. Our hard-working, joyless people sink amid morbid surroundings. In the midst of plenty they ignorantly starve to death; and blindly following the dreary dictates of puritanism they perish, chilled to the core with the cold and chill of New England life and climate.

It is important that this factor should be duly appreciated and estimated in the case of all sick people, and the family physician should make its baneful influence known. The man who attains clear self-knowledge comes to recognize the influence of climate and of seasons, as well as his own periods of depression. He is wise if strong enough to treat them as if they were incidental and abnormal. He should refuse to decide important questions while his view is thus obscured. He should wait for the return of the normal before acting. Alas! how few attain clear self knowledge!

Can we expect to find a remedy? Is not the morbid, cruel life of rural New England driving the young away from their homes and into the overcrowded city? The empty, desolate homes, where motherhood is discouraged by the edicts of "new" life of the "new" women, show what "over-education" is bound to accomplish to make old-fashioned home life a rare condition.

The sadness and the dreariness of rural life casts its influence over many years of existence, even after the home has ceased to exist. The sad heart yearns for what of home life there was obtainable even in those dreary days. The character never quite shakes off the depression. The young people of to-day have more to entertain them than in the days of their grandsires, but the home life and the happiness which comes best to large families is woefully wanting. Strength of body and of mind is not apt to be the fruit of marriages consummated amid abnormal surroundings. The crowding of school lessons into weak but growing children has its limits, and the evils of overstudy on the young are manifest everywhere. Discontent is rapidly on the increase; old traditions are being swept away, and genuine progress, so far as an improvement in the race is concerned, is not enough observable. An element of cheer is needed, less drudgery, more of rational amusement, and more of old-fashioned common sense.

W. T. P.

APPENDICITIS STATISTICS.

To the Editors of THE MEDICAL TIMES:

In THE MEDICAL TIMES of last year I asked Dr. M. O. Terry for a more detailed report on the forty-nine cases of appendicitis out of fifty-one that were said to have been cured by medical treatment. After some correspondence Dr. Terry finally gave us a brief account of ten cases, but these appeared not to have been consecutive cases, and it was not stated when the patients were last heard from. In a matter of such consequence it is highly important to have data in such form that they may be employed in quotations, and it would be a valuable addition to our knowledge if Dr. Terry would give us a later report, stating particularly the date when each patient was last heard from. According to our knowledge of the subject of appendicitis it is to be presumed that some of these ten patients have died or have subjected themselves to operation. Nearly all of them have probably suffered exacerbations of infection by this time, and it will be an important contribution to science if we can learn how the ten patients have fared to date. Dr. Terry may not know how extensively he is being quoted, but I can assure him that the simple facts about the ten cases will be very acceptable to many a consultation involving life or death questions for the patient.

ROBERT T. MORRIS, M.D.

49 West Thirty-ninth St., New York Feb. 24, 1899.

DESQUAMATIVE GRIPPE.

It has been asserted by medical writers that la grippe is a very protean disease. That this is true may be partially proven by the following report of a case to which I was called Dec. 20, 1898.

The patient, a colored girl, aet. 7, was attacked by the usual symptoms seen in a severe form of the grippe, the chief features being a temperature of 105.6 degrees, and a transient convulsion, lasting so short a time that when I reached the bedside it had entirely disappeared. The patient was watched pretty closely, chiefly because of the high fever, but a daily record was not kept, as it seemed only an ordinary severe attack of grippe.

About the fourth or fifth day of the disease the patient's left hand looked precisely as if boiling water had been poured upon it. But the parents were positive that the hand had not been either burned or scalded. Finally the cuticle of both hands and of the whole body exfoliated, that covering the palms being separated in patches one to two inches in diameter, as in a severe case of scarlatina.

Never before having seen such a case, and learning that my medical brethren were not aware that desquamation was a recognized attendant of la grippe, I concluded it might be well to report this case on account of its apparent rarity. I think there was no mistake in the diagnosis, because over a month has elapsed since the case was first seen, and of several other children in the family of the patient, besides those of near neighbors, all of whom were exposed, none have contracted the disease.

W. F. MORGAN, M.D.

Leavenworth, Kan., Jan. 20, 1899.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine, New York, Etc.

Calcium Carbide in Cancer.—Professor James H. Etheridge, of Rush Medical College, in a recent lecture, stated that he had been using carbide of calcium during some 18 months for uterine cancer. While he has not yet concluded that it will cure, it certainly does a wonderful amount of good, as shown by the following sample cases:

The first was that of an old lady who had passed the change of life about twenty years before. The cervix was found entirely gone, ulceration had taken place clear up to the uterus, and there was nothing but a cavity. This was curetted and a piece of carbide put in it. The result was instantaneously a bubbling and boiling. Iodoform was then packed in very tight and left for three days, when the hard mass was found reduced to a clay. The elimination of gas was very painful for a few hours. At the end of five or six treatments at three days' interval the cancerous ulcer, to all appearance, was converted into a simple ulcer. The powdered carbide was used on the ulcer until it all disappeared. On examination three months after there was no discharge or odor. When last seen again, "a few days ago," there was nothing to attract attention.

A woman who had passed 50, beyond the change of life, well nourished and active, came with the cervix nearly all gone, and was generally annoyed with odor, discharge and hemorrhage. She was subjected to the same treatment, and went on in the same way until the cancer was entirely obliterated. To-day she is going around doing her work the same as two years ago. And in addition the speaker had half a dozen cases on his hands now, where the use of carbide of calcium has been very beneficial. It stops the discharges. The patients all improve in appetite, blood supply, and in general symptoms. The time is too brief to say that they are cured, but they live, and live in comfort. How it is done he does not know.

What seems to be a very constant result of using the carbide of calcium in treating the cases of uterine carcinoma, is the abolition of the trinity of symptoms so characteristic of this dreadful malady, viz., odor, hemorrhage and discharge.

Antitoxin in Diphtheria of the Eye.—McCollum, writing on antitoxin in the treatment of diphtheria (*Boston Med. and Surg. Jour.*, Aug. 18, 1898; *Med. R. of R.*,) mentions fifteen cases in which the sight would undoubtedly have been lost except for the heroic administration of antitoxin. In only one of these cases was there destruction of the organ, and this was in abnormal condition at the commencement of the attack. When a diphtheritic membrane appears in the eye the effect of antitoxin on the membrane can be more carefully studied than when it appears in the pharynx. In some of these cases 2,000 units were given as the initial dose, and this was repeated in six or eight hours, if there was not a marked improvement. Except in very young infants, he believes the initial dose should be 2,000 units, and in severe cases 4,000 units may be given; the more concentrated the better, as the possible source of danger lies in the amount of fluid, and not in the inherent property of the antitoxin.

Oxygen as a Remedy for Angina Pectoris.—Writing on this subject in the *Medical Record* for July 10, 1898, Dr. Beverley Oliver Kinnear sets forth his reasons for believ-

ing that in most cases of angina pectoris the pain is induced by a simple hyperemia of spinal sensory centers. In support of this theory he mentions having wholly cured one severe case of angina pectoris (besides very many cases of neuralgia) by applying cold over the sympathetic ganglia and the spinal cord.

There is another remedy which he believes will be found most valuable in relieving the attacks of angina, and that is oxygen by inhalation. Oxygen, when properly diluted with another gas of lighter specific gravity, is readily absorbed by the pulmonary capillaries; and after it enters the circulation its first effect is to dilate the coronary arteries, and a normal amount of blood—saturated with oxygen—being thus added to the enfeebled organ the heart muscle is stimulated and strengthened, and its weakened action immediately overcome in the attacks of angina pectoris. The secondary action of the gas is to dilate every arteriole throughout the body and extremities, thus universally distributing the circulation in normal amount to the whole organism, and thereby warming the body, exciting renewed and active metabolic changes, and withdrawing the excess of the blood from the hyperemic sympathetic ganglia and cerebro spinal nerve centers. Oxygen alone will speedily relieve the attacks of this disorder; but will be found more effectual in combination with cold over the spine and heat to the extremities. The author is convinced that if this combined treatment without the heat to the extremities be continued daily for some months, and in many instances for a much shorter time, in the majority of cases so afflicted a cure will result.

It must always be borne in mind that only pure oxygen, properly diluted and prepared solely for therapeutic purposes is of any value in the treatment of disease.

The most efficient formula now in use is that of the London Oxygen Hospital, and consists of two parts of pure oxygen, one part of nitrous monoxide, and 1 per cent. of ozone, to keep the mixture fresh when in the cylinder.

Injurious and not beneficial results will follow the use of oxygen gas, unless it be wholly free from chlorine and other deleterious gases always present in commercial oxygen.

It may be noted from the preceding statements that pure and properly diluted oxygen gas when inhaled produces the same effects upon the pulse, respiration, temperature, and nutrition as those following the application of cold over the spine.

Oxygen by cylinder is easily administered, as you have only to turn a stopcock, compress the nostrils, place the tube in the mouth, and after complete expiration inhale as deeply as possible, hold the inspired gas as long as you comfortably can, and then exhale slowly through the nasal passages. Two inhalations three times a day, taken standing and before meals, with an interval of two minutes between the inhalations, are sufficient for the daily treatment of angina pectoris; but in a seizure the tube should be placed in one of the nostrils, the gas turned on from the cylinder and the patient allowed to inspire the gas with the respiratory movements, and thus continue until the attack is quite relieved.

Normal Saline Solution in Painters' Colic.—Dr. Belearde, assistant professor at the faculty of medicine of Lille, has successfully treated five cases of painters' colic by means of subcutaneous injection of normal saline solution. The solution used was that recommended by Prof. Havem, of Paris, namely: sodium chloride, 5 grams; sodium sulphate, 10 grams; distilled and sterilized water, one liter. In every case 500 ccm. was injected, and in from 12 to 48 hours diarrhea lasting from two to three days appeared. The pains ceased after the injection and previous to the appearance of the diarrhea

In all the cases treated in this way the subcutaneous injection of the solution seemed not to cause, as usual, a more abundant flow of urine, but to spend all its action upon the intestinal canal. The diarrhea due to the treatment ceases in from two to three hours without treatment. In every case the appetite was at once much improved.

Massage in the Incoercible Vomiting of Pregnancy.—In the *Bull. Gen. de Therapeutics* for Dec. 15, 1897, Jeffroi, while recognizing the fact that a large number of remedial agents have been employed in the treatment of this condition, strongly recommends massage. He states that usually it only requires five or six seances to obtain a complete result, and after two or three rubbings the vomiting ceases. The massage is applied to the region of the stomach and duodenum. Nearly always there will be found when it is begun marked tenderness in this region. He reports a number of cases in which this treatment was followed by very good results.

Nitroglycerin in Spasmodic Croup.—Dr. G. G. Marshall (*Atlanta Med. Weekly*) has found in nitroglycerin an ideal remedy for spasmodic croup where steam inhalations and emetics fail or depress too much to allow respiration. He recommends small doses frequently repeated. To children from five to ten months old he gives from one ten-hundredth to one six-hundredth of a grain, repeated in from five to ten minutes if no effect is noticeable. Usually in ten minutes there is marked relief in the dyspnoea and the general appearance of the child. By repeating these small doses from every 15 minutes to once in two or three hours, the laryngeal spasms are controlled. Sometimes it is not necessary to repeat it more than once or twice; at other times the remedy has to be continued at more or less frequent intervals for two or three days.

The Therapeutic Uses of Solanum Carolinense.—Milwain, of Jackson, Tenn. (*Amer. Med. Mthly.*), has for three years been interested in solanum Carolinense, and has endeavored to give it as thorough a test as possible. He concludes that in small doses it has no therapeutic value whatever (in acute cases), but its curative properties are beautifully shown in large doses, *i. e.*, one-half to one dram. He has found that given in these quantities three times a day, it will produce occipital headache, vertigo, diarrhea, and a relaxation of the system generally. These symptoms were taken from persons who suffered from epilepsy, and who were taking the remedy as a preventive, although at the time free from seizures.

The writer has apparently used it in convulsive seizures of all kinds, no matter of what nature, and claims that he cannot recall one in which it was not of benefit. It is, he thinks, absolutely specific in the spasms of children: and, finally, a tampon saturated with the oil of solanum Carolinense, and firmly applied against the cervix, will produce painless dilatation as nothing else will.

The Therapy of Nature.—In our systems of therapeutics, says the Charlotte *Medical Journal*, too little attention is paid to nature. The average physician endeavors to antagonize the condition he finds in his patient by the use of remedies which are supposed to bring about that result. If the temperature is too high, he endeavors to reduce it. If the heart beats too rapidly, he gives remedies to retard its speed. He forgets that nature has benignly provided for the elimination of the products of disease. The fever, with its elevation of temperature, the increased action of the heart, and consequent acceleration of the pulse, are the efforts of nature to get rid of the disturbing elements, which, instead of being depressed or abolished, should be allowed to do their work. In the case of constipation, a change of diet, using fruits, would be infinitely preferable to pills or other purgatives, accomplishing the work more safely, mildly, and permanently. When the heart is beating wildly, nearly doubling its usual rate, this increased speed is necessary to carry off with sufficient rapidity the additional waste resulting from the disease, as well as to convey to the diseased organs the materials for repair. If now you retard the action of the heart, thereby producing a slower current, you thwart the efforts of nature to remove the disease, diminish the supply of nutritive material, and may possibly bring about a fatal result. Let the physician avoid interfering with nature; give her full scope, only affording a little assistance when she is weak; but always letting her alone when she is able to do her own work. By pursuing this course he will obtain results that will astonish him, and be most gratifying to his patients and their friends.

Tribromphenol-Bismuth.—Somers (*N. Y. Med. Jour.*, December 24, 1898) writes on this compound as an antiseptic in chronic suppurative otitis media. His method is to thoroughly cleanse the external canal and middle ear with hydrogen peroxide applied on a cotton-tipped applicator, all granulation tissue having previously been removed. He then lightly dusts the powder over the secreting surfaces and inserts a gauze drain, which reaches from the tympanic margin to the concha, fitting into the concha, and over the external canal he places a pad of sterile absorbent cotton and allows this to remain for one or two days, according to the amount of discharge. In cases in which the use of this treatment, after other

methods and remedies, had been tried, they were all apparently cured, and he has treated more than 100 cases.

Citric Acid is a simple and harmless remedy in *whooping cough*. It may be taken as lemonade, or applied in any way locally to the mucous membrane of the mouth and throat, not overlooking the region *under the tongue*, the most important point.

Heroin, 1-12, is a superb remedy in bronchitis and bronchial asthma.

Unguentum Crede.—Soluble Silver.—G. Schirmer (*Jour. Am. Med. Asso.*) has treated nine cases of cerebro-spinal meningitis with inunctions of 30 gm. Unguentum Crede in the course of three days, repeating an inunction of 10 gm. at each remission. Combined with this, very hot water compresses were applied to the spine; the nasal cavities were antiseptically cleansed as soon as the patient's condition permitted, and small doses of trional were given, if very restless. All were children, and recovered rapidly, with none of the after-effects so frequently observed with this disease. Edwin Klebs suggests that infection may be carried through the tissues as well as along the lymph and blood system (*N. Y. Med. Monats.*, November), by the leucocytes, which would explain the success of the inunction, and urges tests to demonstrate this with Crede's soluble silver, as peculiarly applicable for the purpose.

On the Prevention of Sepsis, Etc.—Prevention of Sepsis after Uterine Operations.—Dr. B. Crede says:

"On the basis of a large experience I believe I can now recommend a procedure which will effect all that is possible to prevent sepsis, and which will mitigate or cure it when already present, for operations on the aseptic or infected abdominal cavity, for uterine operative work, and for all large wound cavities.

"This procedure consists in the imbedding of Soluble Metallic Silver, the Argentum Colloidale, in the most dangerously situated portions of the cavities and wounds. For this purpose I first employed millet to pea-sized pieces of the metal as supplied to me by the Von Heyden manufactory of Radebeul near Dresden. I soon noticed, however, that the drug in this solid form was but slowly penetrable by fluids, only a small portion of the silver being dissolved. The greater part of it remained undissolved, and, after lying for from five to eight days in the wound cavity, had lost its property of solubility in water and lymph, and had in fact become ordinary insoluble metallic silver. I used the drug later in the form of pills such as I have described as Pillul. Argent. Coll. Minores in my article on 'Soluble Metallic Silver as a Curative Agent' in the *Klinisch-Therapeutische Wochenschrift*, Nos. 14 and 15, 1898. These contain 0.05 gram (¾ grain) of Argentum Colloidale, the same quantity of sugar of milk, and a trace of glycerine. If properly prepared they are soluble in distilled water, the silver being still in the colloidal condition. It is finely subdivided and mixed with the milk sugar, and hence the penetration of fluids and the solution of the silver is rendered easy."

RETROSPECTIVE DIETETICS.

Dietetics in the Summer Diarrhea of Infants.—S. Henry Dessau (*Clinical Recorder*) is of the opinion that in an acute attack of summer diarrhea in a child under two years of age all albuminous and starchy foods should be withheld at once. Milk and the milk foods only tend to furnish fresh fuel for the growth of pathogenic bacteria in the gastro-intestinal tract. Give instead toast-water, made by laying in a large bowl two pieces of stale white bread toasted brown on both sides; pour on boiling water till covered; add a pinch of salt and allow to stand till cool. The clear water is then poured off into a fruit-jar and kept cool by the ice. Barley-water, made by boiling a handful of pearl barley in a pint of water for an hour or more, a pinch of salt being added, can also be prepared, and after it is cool the supernatant liquid can be poured off for use. From one to three tablespoonfuls of either of these foods can be given every hour or two, for 48 hours if necessary. They contain a considerable percentage of nutriment which is easily digested, and, if properly prepared, are rarely vomited. Alcoholic stimulants may be added if necessary. These drinks should always be given cold, as they are thus more grateful to an exhausted and feverish infant.

When the vomiting and stools have improved, which with proper therapeutics, usually occurs within 48 hours, nursing may be resumed at intervals of either two, three, or four hours, according to age.

In deciding the question as to the best form of food to use with artificially fed babies, it must be borne in mind that the food that is the cheapest and easiest to prepare is the best for most persons. If sterilized milk be used it should not be for longer than the summer months, on account of the tendency to produce rachitis. The modified milk is expensive and can only be obtained in the large cities.

For ordinary cases a mixture of cow's milk, diluted one-fourth with water and containing a little cane—or milk—sugar and a pinch of salt or sodium phosphate, is to be preferred. A double boiler lined with porcelain, or made of agateware, can be obtained at any good housefurnishing store; into this the prepared milk is placed and the water in the outer vessel in allowed to boil for 15 minutes. The inner vessel is then rapidly cooled by standing in cold water, and the contents poured into a well-scalded tight fruit-jar, and kept by the ice until required for use. The entire quantity required for use during the day can thus be prepared at once.

Occasionally it will be found that some other food must be used for infants recovering from a severe diarrhea. A combination of barley-water or barley-flour, a tablespoonful, rubbed smooth in a little water, and added to the diluted milk, may then be used with good results. To insure the thorough digestion of the starch that this contains, lactopeptine should be administered.

Overfeeding should be carefully avoided. Every step in the preparation of the food and in its administration must be made with scrupulous cleanliness, and after each feeding the child's mouth should be wiped out with a bit of absorbent cotton wrapped around the little finger and then soaked in a saturated solution of boric acid. If the child appears thirsty, plenty of water that has been boiled and cooled should be given rather than too much food, for water is as necessary to the child as it is to the adult in addition to the food

The Dietetic Uses of Olive Oil.—Olive oil is now used in many ways at one time never thought of. Besides being largely used medicinally, observes *Sanitary Record* (*N. E. Med. Monthly*), it enters into various processes of cooking much more extensively than it did. In massage, bathing and for numerous other purposes, the use of this most valuable natural food is greatly extending. Eminent authorities have found it a potent agent for many defects of the excretory ducts, especially the skin. Eczema has rapidly disappeared upon the discontinuance of starch food and the substitution of a diet of fresh and dried fruits, milk, eggs, and olive oil. Taken in conjunction with a fruit diet its beneficial effects have frequently been marked upon the hair, nails and scalp, supplying as it does to the sebaceous glands the only substance which they secrete when in a healthy condition, and the absence of which is the cause of debility of the hair, frequently ending in baldness. It has long been observed that those who live upon olive oil as a common article of food are generally healthier than those who do not. Its therapeutic and prophylactic qualities are now well known to medical men. Oil is destructive to certain forms of micro-organic life, and it is reasonable to suppose that they can best be eradicated from the system by its internal use. The use of oil not only does this, but it restores to the worn-out or diseased tissue just those elements of repair that its reconstruction demands.

OBITUARY.

Dr. Temple S. Hoyne, of Chicago, died in that city February 4. Dr. Hoyne graduated at the Bellevue Hospital Medical College in this city in 1865, having graduated at the University of Chicago in 1862, and attended the following year a partial course at the Hahnemann Medical College. In 1861, Dr. Hoyne had charge of a hospital in Fredericksburg, Va., in connection with Dr. Frank H. Hamilton, of this city. As an editor, author and teacher Dr. Hoyne held a high position, and his contributions to medical literature were thoughtful, practical and highly valued.

MISCELLANY.

—About 75 per cent. of cases of acute articular rheumatism are ushered in by sore throat.

—Magnesia sulphate, *Medical Summary* says, is a better antidote to carbolic acid than vinegar.

—Fraulein Dr. Katharina Van Tusshenbroek has been appointed professor of gynecology in the University of Utrecht.

—The Woman's Medical College of St. Petersburgh accepts no student without written permission from parents or husband.

—A specimen of the new element, argon, was solidified recently by means of liquid air at a temperature of more than 200 degrees below zero.

—Medical men in Paris find that the oil-motor tricycle is a much cheaper and more satisfactory means of getting over ground than is the horse and carriage.

—Padro Lucero, whose age, as shown by the records of the missions of Los Angeles and Soleda, was 125 years, died at the county hospital, San Francisco, October 25.

—Marriage between epileptics is forbidden by the laws of Texas and Massachusetts. In the latter State syphilitics and alcoholics are also prohibited from indulging in matrimony.

—In difficult diagnoses between measles and scarlet fever Dr. Donkin points to the fact that the region of the nose is always occupied by eruption in measles and the lips peel in scarlet fever.

—A favorite mode of suicide among the African tribes who dwell near Lake Nyassa is for a native to wade into the lake and calmly wait for a crocodile to open its mouth and swallow him.

—Gelsemium, the *Medical Summary* says, has cured many cases of lockjaw, when all other remedies have failed. It must be given in large doses and pushed to the extreme point of toleration.

—Foreign medical men are permitted to practice among people of their own nationality in Italy, but are forbidden, under pain of prosecution and fine, to give first aid to an Italian in a street accident.

—The International Medical Congress will convene August 2, 1900, in Paris. The session will last seven days. It is understood that while French is the official language, German and English will be permitted.

—The need of a scientific test of death has suggested the use of Roentgen rays, as the slightest movement of the heart blurs the skiagraph, and in Paris they have already been successfully used for this purpose.

A convalescent hospital is to be established in Manila or Corregidor Island. The hospital will contain 100 beds, to be enlarged when necessary. Major Owen will have charge of the hospital and a corps of 50 nurses.

—Brandis (*D. Med. Woch.*) has collected ten cases of syphilis in physicians, all infected professionally in the fingers, and all extremely violent cases, only yielding to prolonged and repeated treatment. The diagnosis was made very late in each case.

—Statistics appear to show that chloroform is less dangerous in warm than in cold countries. It is, therefore, always advisable, whenever for any reason chloroform is to be preferred to other anesthetics, to see that the operating room has a high temperature.

—Of the nearly 2,500 physicians in Paris, says the *Pacific Medical Journal*, five or six make from $40,000 to $50,000 a year; 10 to 15 make from $20,000 to $30,000; 100 make from $3,000 to $5,000; 800 make from $1,500 to $3,000, while 1,200 makes less than $1,500.

—There has recently been opened in the Institute for Infectious Diseases at Berlin a department for the treatment of hydrophobia by Pasteur's method, and for scientific research of the subject of hydrophobia. This is the first establishment of its kind in Germany.

—Dr. P. J. Collins says that chlorate of potash is an absolute specific for puerperal septicemia. He gives a tablespoonful of the saturated solution every four hours until the peculiar odor disappears, then every six hours. In malarious districts quinine should also be used.

—Graham (*Dunglison's College and Clinical Record*) points out that a high pulse rate or a moderate amount of fever in an infant does not necessarily mean serious illness unless kept up for some time. Slight causes are sufficient to produce marked circulatory and temperature disturbances.

—A sanatarium for tuberculous patients is to be erected in Havre, France. It will take the form of a villa situated on the shore. A committee, of which M. Sorel is chairman, is inspecting various sanatoria along the banks of the Rhine and elsewhere with a view of incorporating their desirable features in the construction of the new building.

—It has been officially announced in Russia that henceforward women doctors shall be equally entitled with men to all State privileges connected with their profession. This includes both political and social rights. It will open to them all official posts, and will entitle them to pensions, which will not be taken away by marriage, and may descend to their children.

—An alleged discovery of the bacillus of vaccinia, by Mr. Stanley Kent, of St. Thomas Hospital, is recorded in a London newspaper. Mr. Kent claims that it will revolutionize vaccination, as pure cultures of the vaccinia germ can henceforth be used for inoculation in the same way as pure cultures of diphtheria and tetanus are now available for preparing antitoxic serum.

—Dr. Finchman, in the *American Photographer* writing of the cinematograph, says: "Just as the discovery of the Roentgen rays first appealed to the wonder-loving public as a scientific curiosity, and is now deemed an essential part of the armamentarium of every hospital, so in the future will the cinematograph be regarded as a necessity for the pictorial record of suitable cases."

—Seitz suggests that occasionally, say two or three times a year, persons approaching the period of life when senile changes first appear, should restrict themselves to a diet of the tissues of young animals, and to fruits and vegetables, so as to supplement their decreasing resisting power with those elements that prevent fatty infiltration and calcareous change.

—Baron Henri de Rothschild, a member of the Paris branch of the famous financial family, has passed with distinction his final examination for the degree of doctor of medicine. M. De Rothschild's graduation thesis is founded upon observations made in a private dispensary, which he established for the treatment of infants. He was awarded a silver medal by the Academy of Medicine.

—The *British Medical Journal* cites the case of a young naval officer who slept continuously for more than fifty days. He passed into the somnolent condition immediately after passing an examination for the service, for which he had been preparing under forced study for more than a year. On awakening he had perfect recollection of events up to the time he went to sleep.

—It is undoubtedly true, as stated by a contemporary, that "an active promoter of baldness is the employment in common of brushes and combs. In the most frequented hotels, and in barber shops and on sleeping cars, you will see the same combs and brushes used on hundreds of different heads. Bald heads are for the most part the result of this promiscuity"—which ought to be prohibited by law.

—The first lady to win the distinction of a diploma from the medical faculty of Paris is Mme. Gaboriau, whose husband, by the way, is also a doctor, practicing in the Ville Lumiere. Prior to receiving this diploma Mme. Gaboriau had already distinguished herself by gaining the diploma of pharmacy. To secure a doctor's diploma requires five years of study, and the diploma of pharmacy necessitates six years. So the studies of husband and wife together covered a period of twenty-two years.

—A German clergyman has devised a system of faith-healing which has the merit of illustrating the utmost length to which human credulity will go. He tells those seeking for health that as they were originally made of dust the place to look for health is in mud. He orders them to roll in mud and to refrain as long as possible from rubbing off the coating thus acquired. "And do they do it?" Of course they do—scores of them. And if the pelopathist can keep his face straight for a few months he is going to be a rich man."

ORIGINAL ARTICLES.

PERICARDIAL DISEASES, ILLUSTRATED CLINICALLY.

By Thomas E. Satterthwaite, M.D., New York City,

Late Professor of Pathology, etc., Post-Graduate School and Hospital.

INFLAMMATIONS of the pericardium are, as one might infer, closely related to the parts the pericardium covers. In my record of forty hospital and private cases, thirty-three were associated with diseases of the heart itself, or with the roots of the great vessels contained in the sac. Pericarditis is most frequently due to some constitutional disease, like inflammatory rheumatism or Bright's disease; less often to a distinctive infective disease, such as tubercle, septicaemia or scarlatina. There may be other causes, such as cold or an injury. From an etiological point of view, it is convenient to divide pericarditis into the primary or so-called idiopathic form, and the secondary.

The primary or idiopathic form is rare, but cold certainly is a cause of it, and so are injuries of various sorts. It is a well-known fact that needles, pins and other foreign substances that have been accidentally swallowed may find their way into the pericardium, causing acute pericarditis.

Secondary pericarditis occurs in from 20 per cent. to 70 per cent. of acute rheumatic affections. Next in line as a causal factor is chronic nephritis. Following in order of frequency is sepsis, usually from puerperal fevers or bone diseases; then come pneumonia, scarlet fever, measles, typhoid, smallpox and malignant endocarditis. So much for the infective diseases. Or it may be due to such dyscrasias as scurvy, diabetes or alcoholism. Then, it is not uncommon to have the disease a continuation of a more remote affection. Thus, pleurisy may extend into the pericardium, producing pericarditis.

In forty of my cases, as taken from my tables, the causes are given in thirty-six. They are as follows: Rheumatism, thirteen; chronic nephritis, eight; tuberculosis, three; pneumonia, two; septicaemia, two; extension of disease, two; alcoholism, two; syphilis, one; scarlatina, one; malignant endocarditis, one; cold, one.

Pericarditis is found at all ages. It even occurs in fœtal life. For some reason, which is not apparent, males are more subject to it than females. Of my forty cases, there were twenty-nine males, but only eleven females.

It is common to make the following divisions of pericarditis:

1. Acute, plastic or dry.
2. Pleurisy with effusion.
3. Chronic adhesive pericarditis (adherent pericardium).

As a matter of fact, these varieties run into one another.

Pericarditis may occur in small or large areas. It may be confined to a very limited space, or may involve the whole serous membrane. A few thread-like bands may stretch over from the visceral to the parietal layer of the pericardium, or the two opposing surfaces may be covered, rub against one another, or become attached. Friction may cause portions of the fibrine, of which the plastic deposit is formed, to be separated. These portions will then fall to the bottom of the cavity, to be absorbed, or remain and undergo some sort of degeneration. In tuberculous pericarditis there will always be a complete adhesion between the opposing surfaces as the disease progresses. In some cases, and especially in tuberculosis, we may also find an adhesion between the outer surface of the pericardium and the pulmonary pleura.

Acute plastic or dry pericarditis is usually a secondary form of the disease. It is almost always due to some antecedent or concomitant affection of the lungs, heart; or to some general dyscrasia.

Owing to the constant friction of the opposing surfaces of the pericardium, the membrane is apt to have a rough appearance, due to the rubbing of the filaments of fibrine that extend across the sac. When these filaments have any length, they give a "hairy" or villous look to the membrane; hence the name, "hairy heart." Sometimes serum or pus is lodged in the interstices between the fibres, or in the meshes of this imperfectly formed connective tissue, giving the whole a honeycombed appearance. At first the heart muscle will retain its integrity, but if the attachment continues the muscular tissue will begin to disintegrate, at first along the border of the pericardium. In adherent pericardium of long standing there is invariably myocardial degeneration; a condition which is, of course, irremediable.

Sometimes there are few or no objective signs. The patient may, however, complain of præcordial weight or distress, or refer to a pain in the ensiform cartilage. The pain may be steady or periodic, slight or intense. It may extend up the neck or down the left arm. As soon as effusion occurs there is a diminution of the pain. It may be caused at first by the friction of the opposing rough surfaces. Distension of the sac, however, with fluid will cause a return of the pain. Occasionally the pain is anginoid in character. Usually, there is some fever, but the temperature seldom rises above 102 degrees, though it may reach 108 degrees or more before death. In a single instance, associated with broncho-pneumonia, I have known it to reach 110 degrees at death. Ordinarily the nervous symptoms are indicated merely by headache; but there may be melancholia or delirium. Among other phenamena I have noted dizziness, faintness and even cyanosis.

Rheumatic pericarditis usually occurs, if at all, during the first or second week of inflammatory rheumatism, but it may precede the rheumatic attack.

The first of the physical signs is difficult inspiration, but this sign may be absent. Palpation, however, over the pericardium, may reveal a fremitus. If felt, it is usually over the right ventricle, the most anterior portion of the heart. There may be a thrill. The heart's action is apt to be irregular, even tumultuous. Auscultation may reveal friction sounds, the most distinctive of the signs. It is a double sound, not perfectly synchronous with the heart, and somewhat more prolonged. And yet these friction sounds may be mistaken for endocardial murmurs by experienced clinicians. I have known sev-

eral such cases, as the autopsies have shown. Although usually double, the friction sounds may be single or triple. They are in every case transitory.

The sound may also have a peculiar rubbing or creaking sound, like that of new leather, or it may be musical. It is always superficial, close to the ear, and intensified by the pressure of the stethoscope on the fourth and fifth interspaces.

Friction sounds may be heard up and down the sternum. They are often best noted over the aorta, but may be heard at the apex. Unlike valvular murmurs, they are not transmitted in definite directions, while the intensity depends on the position. They are best heard when the patient takes the upright position. The pulse may be feeble, rapid, irregular, paradoxical or dicrotic. It may be as slow as 56 or as rapid as 130.

Another symptom is the epigastric pulse, but this is not distinctive. It is seen in Graves' disease, and in other nervous conditions.

The great difficulty in the diagnosis of acute plastic pericarditis is that it is so apt to be obscured by attendant pulmonary or cardiac diseases, which may completely mask the symptoms or overshadow them.

The course of an attack of acute pericarditis will vary. It may last only a few days, or it may take on the sub-acute form, passing into pericarditis with effusion.

On the whole, the friction sounds of pericarditis are not difficult to recognize, and should not be mistaken for organic valvular murmurs, but this mistake has sometimes been made by our most prominent clinicians. It is more difficult sometimes to distinguish between pericardial and pleuritic friction sounds. This danger, however, can be eliminated by making the patient take a deep inspiration and then hold his breath. By this act the lungs, if not attached by adhesions, will be retracted widely apart, leaving the pericardium quite uncovered by lung tissue.

Pericarditis never kills directly. It is the secondary effects of it that are to be feared. The fibrine may be absorbed, and that is the end of it, so far as danger to the integrity of the heart is concerned; or it may survive as a scar on the heart's surface, known as a "milk patch." But, if, as the inflammation subsides, the two opposing pericardial surfaces unite or cohere, the result will necessarily be hypertrophy and dilatation of the heart, and degeneration of its substance.

In tubercular pericarditis, there is great thickening of both the parietal and visceral layers of the pericardium, and the acute disease always goes on towards the chronic form, and eventually there is more or less of a completely adherent pericardium.

The treatment of acute dry pericarditis is simple. The patient should be put at rest. Sedatives, such as the bromides, serve a useful purpose. Rubefacients, blisters and dry cups are also indicated. More than these are rarely necessary.

Pericarditis with effusion presents special features. It is usually the sequel to the acute form just described. The effusion may be serous, bloody or purulent, and the amount will vary from 1 to 70 or more ounces. It is usually from 8 to 15 ounces, in my experience. It is common in pleurisy, pneumonia, endocarditis and acute rheumatism. Although, as I have said, this form of pericarditis is apt to be a sequel to the acute form just described, the onset may not be appreciated, owing to its insidious character; but there may be pain, which is usually increased by pressure. Dyspnoea and palpitation are also symptoms when the effusion is extensive. In such instances the patient will show signs of restlessness, or his countenance will be anxious. The pulse may become rapid—it may reach even to 200, 300 or 400, and be paradoxical—it may be very weak or disappear on inspiration. There may be distension of the veins of the neck. In rheumatic forms it is not unusual to have cerebral symptoms; indeed, there may be delirium and coma, but these will be due to the intercurrent disease.

With ordinary cases of moderate effusion in adults there will be no external manifestation of the effusion, but in children, if the effusion is large, there will be bulging of the praecordial region; and, perhaps, coincidently, oedema of the chest-wall. On palpation the apex beat may not be found. The apex is apt to be thrown up from the fifth intercostal space, so as to point outward. If there has been a friction sound noted, it will usually disappear, as the effusion extends or it will remain for a while, exclusively at the base. On percussion, there will be an area of increased dullness about the base of the heart. The shape of this area is peculiar. Unlike the area of cardiac dullness, the outline will be that of a pear or truncated cone, with the base below the sixth rib and the apex at or above the second interspace. I have known in an exceptional instance the transverse width of the pericardial effusion to be eight inches, and reach from nipple to nipple. As the effusion increases the heart sounds become more indistinct. Whenever the pericardial friction sound is distinctly heard, the physician should anticipate a possible effusion, and at once demarcate the heart's area with a dermographic pencil, so that any increase in the area will be shown and he may thus be able to note the progress of the effusion.

The effusion may extend rapidly, causing suffocating symptoms, or may subside very rapidly. Even exudations of pus, if small, may sometimes be absorbed. Such septic cases sometimes lead to a fatal result in a few hours. On the other hand, large serous effusions developing slowly may be borne fairly well for several weeks, giving ample time to institute remedial measures.

In general, serous effusions disappear of themselves without special treatment directed to the effusion. In the purulent or hemorrhagic forms, of which I will speak later, the disease is usually fatal, because the constitutional and concomitant disease, which is the more serious, is of a fatal character. In rheumatic cases, the prognosis is apt to be favorable. In other cases of serous effusion the prognosis is more uncertain.

It is not always easy to distinguish between dilatation of the heart and pericardial effusion, especially in stout people, and in women whose breasts are large. In dilatation, from whatever cause, there is a waving impulse of the heart, and the apex is better felt, though in many cases of fatty heart it may not be appreciable. A point of great importance, however, is the configuration of the dull area.

A skillful percussor can in most cases outline the heart's borders sufficiently well to show the general contour. In enlargement, the heart is shaped like a pear, with the small end directed downward and outward, while in effusion, when there are eight ounces or more, the form of the sac as marked out on the chest wall will be pear-shaped, with the base directed downward and outward, and the small end directed toward the manubrium. Change of position in the patient makes very little difference in the area of dullness in enlarged heart, while in pericardial effusion a considerable difference is generally apparent. If physicians would practice demarcation of the heart by percussion, it is probable that they would learn to avoid the mistake that is sometimes made of confounding hydro-pericardium with a large heart. The greatest difficulty is sometimes found in distinguishing a pericardial from a pleuritic effusion. We should remember however that a large pericardial effusion will compress the lung, much as a pleural effusion. In both, the lungs will be compressed if there is much fluid, but in pericardial effusion compression will be mainly exerted on the lower lobe of the left lung, forcing it towards the left, and if this lobe is much compressed there should be increased vocal resonance and bronchial breathing, as heard from behind. On the other hand, if pressure is brought by the fluid on the posterior part of the left lower lobe, and its superior part is attached to the front of the pericardial sac, it may take on compensatory emphysema and then the percussion note will be tympanitic.

Both in pericardial and in pleural effusions the respiratory sounds are feeble whenever the action of respiration is interfered with. It is well to remember that in rheumatism the effusion is apt to be sero-fibrinous; in tuberculosis it may be fibrinous or fibro-purulent; in infective diseases, such as malignant endocarditis, it will probably be more or less hemorrhagic. In the effusions of old people there is also a tendency to the hemorrhagic form. Some curious mistakes are shown by my hospital records. Thus, I have known enlargement of the left lobe of the liver to be mistaken for pericarditis with effusion. So small an amount of liquid as 4 to 6 oz. will not ordinarily be detected, but it may be assumed that if effusion takes place in a case of acute heart disease, the amount of liquid in the sac will be at least from 4 to 8 oz. Unless we resort to aspiration, however, there is no way of distinguishing between pericarditis with a serious effusion and hydro-pericardium, due to dropsy of the sac.

In the matter of treatment, absolute rest in bed is the first indication. In extreme cases wet cups to the praecordium may be advisable for plethoric people, but my experience tells me that they should seldom be resorted to in this country. Dry cups and rubefacients are in order, however. The ice or cold-water bag are recommended by continental physicians but at best they should only be used for temporary relief. The diet should be carefully regulated so as to prevent gaseous distention of the stomach, which adds greatly to the pericardial distress. The physician should also address himself promptly to the kidneys and skin, so as to relieve the system of its superfluous fluids, and also to the heart itself; and digitalis, which is both an established heart stimulant and diruetic, will hold the first rank. It should be given in doses of 1 to 2 grs. of the substance two or three times a day; or by tincture or infusion. The latter method of exhibiting it is still popular, because it is felt to be more reliable. Acetate of potash has achieved an excellent reputation in cardiac effusions. It is both a diuretic and a diaphoretic. From 10 to 30 grains may be given every four hours. In the smaller dose it is a diaphoretic. A common remedy is the pill of calomel, digitalis and squill, one grain each, to be taken three times a day. An excellent remedy is Basham's mixture, consisting of the chloride of iron, dilute acetic acid and the acetate of ammonia—it is both a diuretic and diaphoretic, and never produces alarming symptoms. If the disease has taken on a sub-acute form, iodide of potassium, in 7 to 10 grain doses, three times a day, will tend to absorb the fluid. It will sometimes act very efficiently, though slowly, in very large serous effusions. Ordinary alcoholics and, perhaps, diffusable stimulants, or heart tonics, like strychnine, in doses of from 1-60 to 1-25 grain, may be found desirable. In great praecordial pain and distress opium may be necessary; or trional, in doses of from 15 to 30 grains. Paracentesis may be applicable in some cases. In sixty cases collected by Roberts, there were twenty-one recoveries after the operation. There are different views as to the proper site for the puncture. Some recommend that the aspirator needle be introduced in the fourth or fifth interspace, from 2 to 2½ inches from the left edge of the sternum (MacDonnell). Roberts insists that the best spot is the fifth left interspace, 2 to 2¼ inches from the median line of the sternum. Bristowe says the preferable site is at the inner end of the fourth or fifth left interspace, close to the sternum. He suggests the use of a fine aspirating needle first, to determine the character of the liquid. Rotch recommends the fifth space, to the right of the sternum. Some recommend the third left space 1½ inches from the sternum. The important point is not to injure the internal mammary artery, which runs along the edge of the sternum until it reaches the sixth rib, where it bifurcates, continuing downward and outward in the sixth interspace. The operation should be done slowly and carefully. It is not demanded except in rare cases. According to MacDonnell, the normal pericardium can be made to contain, under pressure, only about 10 oz. of liquid, but, according to Stokes, 36 oz. may not produce dysphagia, and yet a sudden discharge of a few ounces of blood or stomach contents into the sac hay cause sudden death. In a case from the practice of my friend Dr. H. C. Heffenger, of Portsmouth, N. H., more than 3 quarts (48 oz.) of fluid, were removed by aspiration at one time and seven weeks later 4 quarts (64 oz.). Sometimes there may be pus in the pericardium, either by itself or intermixed with the serum and fibrin or blood. It is always secondary, and due to some deposit of pus elsewhere, such, for example, as abscess of the liver, pyaemia, or septic peritonitis. In fact, if any accumulation takes place in the pericardial sac in the course of these affections, it is pretty apt to become purulent. The remedy for such a condition is incision, free drainage and antiseptic injections. It is hardly worth while to expect that a cure will follow

aspiration, even if it be frequently repeated. Some little success has attended the operation by thorough drainage. While a very small amount of pus in the pericardium may be absorbed or calcified, a large amount will inevitably lead to a fatal issue, unless free incision be resorted to. When blood is effused in the pericardium, it is the result of injury to the pericardium, heart or great vessels, or it may be the result of disease in some adjacent part, such as pneumonia. It is apt to be associated with aneurism of the first part of the aorta. The only way of determining whether blood be present or not is by aspiration. The amount is usually small. Large or sudden hemorrhages may cause the heart to stop suddenly. While this kind of an effusion has in some instances been relieved by aspiration, the effusion is so rapid and unexpected that the patient may be dead before his malady is even suspected.

The pericardium usually holds from half an ounce to an ounce of a greenish-yellow serum. When a considerable quantity is present in dropsy cases, we have hydro-pericardium, or pericardial dropsy. It occurs frequently in chronic Bright's disease, and sometimes in scarlet fever. The diagnosis of hydro-pericardium is a matter of inference, unless aspiration is resorted to; but the clinical history of the case will generally suggest the character of the effusion. Its treatment has been considered under that of pericarditis with effusion.

Pneumo-cardium, or air in the sac, is of very rare occurrence. The causes are, so far as we know, cancer, ulcer of the stomach, or perforation, as from wounds. If there is a large collection of gas, the action of the heart is naturally interfered with, causing dyspnoea, cyanosis and collapse. The ordinary area of dullness is replaced by areas of metallic, or cracked-pot sounds over the gas. Splashing may possibly be heard. The sounds are like those of a circumscribed pneumo-thorax, but we may distinguish the two in this way: When respiration is suspended the sounds persist. Recovery has taken place in a few rare instances. The treatment is surgical. In chronic pericarditis, or the adherent pericardium (for this is the only form that can persist and be compatible with life), the attachment may be partial or general, as I have already said. Slight attachments, especially over the great vessels, are common and have no great significance. Occasionally a fibrous band or two persists after an attack of acute pericarditis, but they will not excite attention unless the heart's action is interfered with. When there is such a general adhesion that the heart and pericardium are practically united, the consequences are always serious. Several things happen. At first the heart enlarges to overcome the embarrassing effect of its attachment to the pericardium; then it dilates and later undergoes more or less true fatty degeneration. Obliteration of the pericardial sac, which is not uncommon, especially in old rheumatic cases, is necessarily followed by degenerative changes in the myocardium. There are no distinctive signs, but merely those of advanced heart disease, such as dyspnoea, palpitation, a sense of praecordial constriction, cyanosis and, perhaps, dropsy. In these cases we find an enlarged area of cardiac dullness, with an enlarged area of cardiac impulse, which may extend from the third to the sixth interspace. There is no characteristic wave of the impulse in adherent pericardium, but retraction of the apex during systole is an important sign. Friedreich's sign also has value—it is collapse of the veins of the neck during cardiac diastole. It is noticeable in adherent pericardium that the dullness on percussion may reach the first interspace. On auscultation, the pulse may have a galloping rhythm. It may also be paradoxical.

In my experience, however, as derived from a study of my hospital cases, adherent pericardium is not often recognized during life; and my cases have passed under the observation of our best clinicians. Assistance in diagnosis may be derived from the fact that two-thirds of these cases have been associated with acute articular rheumatism. Pleurisy and tuberculosis are also manifest causes. In many of my cases there was dyspnoea and praecordial pain; the heart's action was weak, and the sounds were muffled. Other signs that I have noted in adherent pericardium were cough and a slow pulse. A soft systolic bruit at the apex was not uncommon. Sometimes creaking sounds were heard over the pericardium, as if old adhesions were being stretched.

THE CIRCULATION OF THE NERVOUS SYSTEM.

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PART II.

THE difference between the educated and the uneducated is principally one of the power of using language to express with accuracy and precision. thoughts and feelings.

The motor element of ideal vision and thought is speech, but the words and language are not thoughts and feelings, but only the symbols by which we try to express them, just as the feat of the athlete is the symbol of his musculo-nervous condition. Again, what is the difference between the bestial sexualism of simple untutored man, and the chivalrous love so carefully and voluptuously analyzed in one of our recent family magazines? Words, only words.

In the nervous system, as in the circulatory system, it is not alone the material substance that controls the organism, but the forces that act through them, that determine their function.

The potential energy of the nervous system is itself the result of the intermolecular and chemical actions taking place within the organism. The energy taken up by the nervous system is much more plastic, mobile, and elastic than that of the circulatory system, and hence diffuses it with greater rapidity, thus exercising a controlling and determining power of all the other functions of the body.

Here, too, there is a great similarity of principle between the food-energy taken up by the circulation of the blood, and the energy taken up by the nervous system. The difference is one only of degrees of density and plasticity. All the organic substances of varying kinds may be classed as the physical basis of food. The dead beef and bread are metamorphosed by the physico-chemical laboratory of

the alimentary canal and taken up by the circulatory system as living pabulum that has nothing in common with its previous state, for "the dead matter of the universe has been converted into the living matter of life." The transition, too, is so involved and complex, that at no moment can you say now it is the one, now the other.

This is equally true of the physical basis of the varying forms of energy. When the forces of light, heat, taste, smell, and pressure enter the living matter of the nervous system, and into the mass of the organism, they are not destroyed.

If we can no longer recognize them, it is because they are transmuted into life, into the various forms of nervous energy, in the circuit of which they are known as sensations, feelings, and volitions.

Another and equally wonderful comparison between them is that one part of the digestive tract and of the circulatory system is peculiarly fitted to perform special functions, so there is, also, a special division of "specific energies" of the nervous system. Not only the external, but the internal, parts of the organism continuously send nervous pulses specific in kind to be elaborated and adjusted by the central system into a general equilibrium or unity. From the simple incoherent motility and irritability of the germ-cell, long before muscles and nerves exist, by regular and gradual development in connection with the environment in which it lives and out of which it grows, until it has reached the perfect co-ordination and adjustment in the highest type of man, we see the same forces at work along an established and regular order. This is sufficient to explain the mystery, but what the reality is passes all understanding.

The plastic and impressionable brain comes under the influence and discipline of the external world; it takes up such forces as it is capable of, and so moulds individuality and character.

It is because the cerebral cells are subject to the educating influences that there is a varying morality between men, that cause some to "rise to angels and others to fall below the brutes." And between man and the lower animals, because the latter are more instinctively organized, and hence incapable of great diversity of co-ordination.

By this time, no doubt, you might say, of what interest is this to the physician? Generally speaking, at least this: general principles give comprehensive conceptions.

He may not understand the details of every conscious conception, but a knowledge of its general laws will prevent him from being led into the oasis of "every metaphysical Sahara and coming out seemingly refreshed." He will understand that there is no more possibility of transmitting thought, *per se*, across continents and oceans, as claimed by telepathists and spiritualists, than there is between the cylinder of one gramophone with another.

It eliminates and weeds out an extensive field of delusions, and the energies can be directed to an acquaintance and study of the physiology of the senses and functions of the organism, without which he cannot have an intelligent conception of psychology.

"In truth (says Huxley), the laboratory is the fore-court of the temple of philosophy; and whosoever has not offered sacrifices and undergone purification there, has little chance of admission into the sanctuary."

Witness, for instance, how physiology and psychology have revolutionized and re-established the domain of insanity; in times past it was believed that the "will" and the "mind" was in possession of some unclean spirit, but is now interpreted as the direct effect of physical disease. This illustrates, too, that "old ideas are not necessarily true ideas" because they are old; and because they are old and moss-covered with tradition is no reason why we should renounce our reasoning faculties that we may receive them with a "reverential awe," no longer subject to comparative analysis.

While the circulating energy of the nervous system adjusts the body to the ever varying conditions of the external world, and maintains it in health, it is because the stored-up energy and vitality is in excess of the usual requirements.

But let a gradually developing pathological condition arise, the result of some infection or contagion, wherein we have a struggle of organisms for ultimate supremacy continuing their conflict for some time, and the constant strain will ultimately cause a rupture of the equilibrating forces of the nervous system, that displays itself by suddenly breaking out with acute disease in full bloom; the itensity of which is usually the measure of its virulence, and the power to resist the vitality of the organism.

In that purely physiological disease, sunstroke, in an otherwise healthy man, with high temperature and loss of consciousness, there is an acute disturbance and change of the cells of the cortex and cerebellum, resulting from the continued excess of heat causing exhaustion of regulating forces and rupture of equilibrium, often so severe as to cause speedy death.

Under such conditions the immediate abstraction of heat by whatever means is the method of treatment, and the more rapidly it is accomplished, the less destructive the process and the more complete the recovery. In this disease the symptom-complex somewhat resembles a fit of epilepsy.

There is, it is true, as a rule, no fever in epilepsy, but in both there is loss of inhibitive power of the brain and consciousness. The expenditure of energy is no longer directed by thought, but is drafted off along the lower reflex centers irregularly and spasmodically in the form of convulsions, and what was lost by thought, the inhibitive power of the brain, was gained by motion.

The converse of this is equally true; what is gained by thought is lost by motion. The young girl on a railroad crossing before a rapidly approaching train is so absorbed and overwhelmed by the thought that it consumes the whole of her nervous energy and vitality; she loses all power of movement and thereby her life. She willed to move, but could not because all the disposable nervous energy was consumed by the thought. "To think is to refrain from speaking and acting."

The hypothesis of the circulating energy of the nervous system also gives us a general interpretation of the phenomena or symptoms in those nervous diseases like palsy, chorea, and ataxia, resulting from degeneration of nerve centers with consequent

disturbed and irregular transmission of nervous energy.

The balance of the muscles that in health held the limbs steady becomes irregular, tremulous, and inco-ordinate. The energy is not sent into them in sufficient volume and regularity, thus failing to check now the one set, now the other.

This is also illustrated in therapeutics. Strychnine is a stimulant of the ganglionic centers, with increased activity of the whole nervous system and all the vital functions, thereby causing increased arterial tension, slowing of heart's action, and increased tension in the muscles, with a general exaltation of the vital powers that is continuous in character.

Cocaine causes a weakening and change of function in the nerves to which it is applied, and with the changed and weakened function there goes a constriction of the blood-vessels with weakened local circulation, thus aiding exhaustion of sensory nerves and favoring anesthesia, so that irritations like surgical operations, ordinarily very painful and destructive, are not registered in consciousness, for the disturbed rhythm or change of function is so great it cannot be co-ordinate therein. By increased dosage, this spreads to the general organism, the heart's action gradually getting weaker and faster. At the same time the loss of power of motion is almost proportionately as great as that of sensation, but not so localized, and the "sense of well-being" resulting from disturbance of co-ordination of sensations with changed state of feelings, is a delusion and snare, because the circulating energy of the nervous system is weakened after the same manner as in alcoholic intoxication.

In normal or ideal brain-function there is a diffused general activity. The circulating energy of the varying peripheral sensations enters local portions of the brain with locally increased function, and the adjustment, assimilation, and organization with the other functions is the equivalent of the perpetual alterations of the organism expressed in states of conscious feeling. This is why consciousness exists only under the conditions of perpetual change. "The most perfect co-ordination is that of the highest wills, of the great men of action, whatever be the order of their activity. Cæsar, or Michael Angelo, or St. Vincent de Paul. It may be summed up in a few words: unity, stability, power. The exterior unity of their life is in the unity of their aim, always pursued, creating, according to circumstances, new co-ordinations and adaptations.

"But this outer unity is itself only the expression of an interior unity, that of their character. It is because they remain the same that their end remains the same. Their fundamental element is a mighty, inextinguishable passion which enlists their ideas in its service. This passion is themselves; it is the psychic expression of their constitution, as nature has made it." (Th. Ribot, "Dis. of Will," p. 28.)

In those persons with small storage of nervous and vital energy, with a weak and limited co-ordination of ideas and feelings, that have no well-formed will of their own, and are hence the easy victims of the ideas forcibly impressed upon them by others, we have those states of feeling we call hysterical states of consciousness.

By the general mimicry of the nervous system, coupled with a weak and imperfect organization, they become the victims of all the varied forms of functional nervous diseases that we classify as hysteria; the lack of "stability, unity, power."

In these unstable conditions of the nervous system, adjustment cannot act because it is not enduring; it is governed by the whims and caprices of the feelings, emotions, and passions, destroying rational conduct by the inconstancy and change produced by the weak and inco-ordinate functions. There is no longer the possibility of choice followed by action. Mental activity persists as an irresistible impulse; this is its volition, but its concentration of attention and inhibition in time and space is almost annihilated.

It can longer choose in order to act. The potential energy of the nervous system is drafted off in the direction of its then controlling impulse or feeling. It is not, as commonly stated, an exaltation of the higher centers, but a weakening. It can no longer inhibit and store up energy for the purpose of adjustment in time.

In confirmed masturbation, where centers are weakened, a sight or thought may cause an orgasm. The same order of loss of motility, beginning with the higher forms, is a common observation as a result of the abuse of alcohol.

The last, more complex and higher, but less organized development is the first to give way, until, eventually, it is incapable of attention and at the mercy of trifling whims. The power of inhibition, or co-ordination, is weakened. This is the alcoholic state of consciousness, the virtues of which, in the language of Oliver Wendell Holmes, "are like poor calico; they won't wash."

When the intoxication continues in great excess, the adjustment becomes so weak there is eventually a rupture, with chaos of co-ordination and a wild, riotous, and incoherent mania.

It is in persons with the hysterical constitution that hypnosis may be produced by suggestion or concentration of attention, until it reaches such a height that there is no longer comparison or choice with other states; it reigns supreme as an isolated, or hypertrophied state of consciousness. The other functions of the brain are so drained and weakened that they sink down into the stream of unconscious existence, for the vitality is insufficient to sustain the whole.

In the first stages or milder forms of hypnosis, while consciousness is preserved, there is nevertheless a manifest automatism, with loss of volition to act; sufficient co-ordination to maintain consciousness, but insufficient impulse or energy.

As it deepens and concentrates the energy into a single thought or suggestion, it becomes, like all ideas and thoughts in general, composed of a tendency toward motion. It is a common experience that the concentration of attention caused from looking down from a great height, or into a yawning chasm, gives one the sensation of putting the thought or feeling into action, and some with difficulty restrain themselves.

We find that the circulation of the nervous system not only regulates with system and order the general functions of the organism according to physiolog-

ical laws, but in the apparent chaos of mental life there is displayed an orderly succession that, when we once grasp the general principle, makes psychology appear as a systematic science.

There is a school of modern psychologists, at the head of which is that distinguished scholar and student, Alfred Binet, that has been industriously at work endeavoring to establish a "psychic law" of "double consciousness," "two personalities," "two egos," in one person, to which I want to give a few moments' attention, as it seems to me their deductions, from the analysis of their facts and experiments, go far to prove the hypothesis of the circulating energy of the nervous system and to cause their conclusions to fade out of the realm of possibility. Their experiments are founded almost exclusively in hysterical patients, patients with greater or less exhaustion of nervous energy and irregular and perverted co-ordination of sensations.

The general principle observed in the experiments upon hysterical subjects with anesthetic regions, resolves itself into the problem, why the sensations therein provoked do not reach the general consciousness? That it is received by the other "ego," or sub-consciousness, is (they say) determined by the appropriate responses and volitions.

But this is equally true of the frog whose brain has been cut away. A drop of acid placed upon his flank is rubbed off by the foot of the same side, and if that foot is held he rubs it off with the foot of the other. This is a reflex action, an appropriate response by the "other ego;" and when it becomes more complex, like the chick just hatched picking the grain of corn, we call it instinct; and as it rises still higher, becomes more complex, there is a choice or volition, and we call that reason and will. They are all parts of the same physiological process, with only a difference of degree, and all dependent upon the innate faculties or memories of the material organization, of which consciousness is but a feeble part of the whole, "a synopsis of it" that exists only under certain conditions of activity of the brain.

The anesthesia of hysteria is caused by a changed state of the nerves producing a change of function that may be central or peripherial, that not only is weaker, but has a changed rate of activity after the manner of cocain-anesthesia, and is no longer co-ordinated with the regular and higher functions of the circulating energy of the nervous system that produces states of consciousness.

While there is an appropriate reaction to irritations, although not reaching consciousness in the conscious subject, it does not necessarily mean there is "another personality" or "consciousness," but rather that it is the instinctive reflex action of the material organized memory, and examples of which everyone may observe every day of his conscious, and even of his sleep, or unconscious life. To produce consciousness there must be a certain tension-activity and co-ordination of the circulating nervous energy in the cortical substance of the brain, of which there are varying degrees, not only in the same individual, but among different individuals, and of which clear consciousness is but a small part of total consciousness, in the same sense that distinct vision is but a small part of the whole of vision.

To produce intense and well-directed states of consciousness, there must be a brain and nervous system capable of developing them.

The wonderfully adjusted and co-ordinated muscular system fastened to a symmetrical and compact bony frame-work, by training and organization may be developed into the poetry and power of motion of the athlete. So the cultured brain throws off well-organized and adjusted states of consciousness. The graceful skill and production of the athlete, like that of the orator or artist, is only the function of their organization, and after their performance is gone forever, but that which produced them, that material memory of the organization, can reproduce them similar in kind.

Things and thoughts with which we are familiar, although foolish and even destructive, we give respectful hearing, and, at best, receive with tolerance and indifference; but strange and new thoughts, especially when they come "across lots" of our established order of mentality, even though they be pure and true as nature, we are apt, at least on first impulse, to drive from the premises, often with spurred boots.

It is no doubt true that all the leading physiologists, psychologists and philosophers are of the opinion that the idea of a circulating energy of the nervous system is untenable and in physics impossible. They all admit "nerve-currents," or "chemical transformation," or "molecular movements" of a local and special function of the nerves irritated, but nothing more.

The problem as it appears to them is: How can a special and definite sensation be harmonized with a general circulation of the nervous system? The reaction-time of a special sensation through the specific and specialized nerves is a measurable quantity, influenced largely by the state of attention, fatigue, and the varying influences and conditions of the body.

Where there are no special sensations rising specifically and definitely into consciousness, there is an equilibrium of the nervous system with an indifferent state of feeling, but as soon as there is a special irritation of some nerve of sensation, it is more active and intense for the time being, and stimulates the indifferent state of feeling into a definite state of consciousness. The general state of feeling takes a concrete form, and we call it an idea.

Thus consciousness results only as an adjustment or equilibration of the rest of the circulating energy of the nervous system in the brain. This co-ordination of iritations of varying wave-lengths in the brain, and their adjustment in time and space, causes an expenditure of the energy of the brain in the form of heat and waste products, with a change of the chemical and molecular structure of the cells; this is its function, and out of this complex expenditure and adjustment rise those states of feeling we call mind, as one of its functions.

Physiological and psychological experiment cannot reveal a mental act, because we have nothing by which we can measure the rapidly changing rhythm of motion in the labyrinth of the brain. We can only observe the coarser form of energy in the form of heat, waste products, and chemical change.

The bile is not liver, neither is urea a kidney. This is equally true of mind. It is not, and never can be,

brain, but, like the others, it is a functional product of the brain. It is true we cannot, like the other products, handle it and put it to chemical and physical tests, but this is because, like all forces in general, it is too elastic for our manipulation. While incapablt of proof, yet its related existence is demonstrated by the very science of physiology and psychology.

No other hypothesis gives us such a rational conception of the continuity of life. The circulation of the blood only carries the coarser material substances, to be elaborated into the higher and more complex forms of life carried on and held together by the circulating energy of the nervous system, in the same sense that the alimentary canal elaborates the material for the blood.

It is the only hypothesis that gives us an intellectual and comprehensive interpretation of mental phenomena. It is in harmony with all sound deductions in physiology and psychology, and with every moment of our daily life. It is a conception applicable to the simplest stages of organic nutrition up to the highest processes of feeling or thinking. To me it is a reality as definite as that of the blood, with no obstacles in physics, philosophy, or anatomy.

We cannot conceive the laborer in the field or factory, in the classroom or counting-house, in any other sense than as directing his circulating nervous energy in a special and definite direction, for work of all kinds is the directing of the indefinite nervous energy in special directions to produce results that may be corn or plows, or "ideas" of wider range that cannot be so objectively materialized or idealized, but are, nevertheless, related in kind. The effort exerted in any feat or act is adjusted, not by the muscles, nor by the blood, but by the direction and concentration of the nervous energy.

The function of the brain is a world of its own, and it is as difficult to determine exactly what thoughts, ideas, or volitions will next come in control, or active existence, as it is to determine the manner of the winds, rains, and clouds, although we know they are determined in a regular and uniform manner in accordance with physical laws.

The physiology of the senses demonstrates that ideas of time and space, color, and odor, are as much a material reality as "corn and plows."

Every sensory impression stimulates the special nerves and cells to increased activity and combustion, which nutrition builds up and organizes so that an irritation similar in kind is repeated with greater ease. This is memory. An impression that at first was received with only a limited and circumscribed consciousness, by continued repetition becomes more comprehensive, because the energy that at first was received and transmitted with difficulty passes on with ease, allowing related impressions to become organized. This is education, the basis of knowledge.

It is upon this organic materialized memory inherited from our progenitors that depends our greater or less perfection, and the extent of our capabilities to react on the environment.

Everything which stirs in the "mind" is conditioned by its place in the system of nature, for no life can continue and no life exists without the constant reactions of the forces of the environment.

The physical co-ordination and adjustment of the "specific energies" of the nervous system is its psychical function, related in kind but more complex in composition, and the one as well as the other is an ultimate and irresolvable fact of conscious experience, and in the same sense as "that the form of the crest of every wave that breaks wind-driven, on the seashore, and the direction of every particle of foam that flies before the gale, are the exact effects of definite causes; and, as such, must be capable of being determined, deductively, from the laws of motion and the properties of air and water."

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PYOKTANNIN IN CANCER.

By Wm. Francis Honan, M.D., New York.
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With the advantages of modern methods the ease and comparative safety with which hitherto dangerous localities are invaded the surgeon of to-day is apt to regard his achievements with more or less pardonable pride. He preserves a discreet if rather gloomy silence when his enthusiasm is invited to expend itself upon the subject of malignant disease. Latter day technique has done much to prolong life, to minimize the sufferings perhaps, which usually attend this dreaded disease, but too often our best operative efforts, if the disease is advanced, seem only to fan the flame of its dormant fires. The reasons are perhaps easily understood. Williams, "Twentieth Century Practice of Medicine," states that throughout the body malignant neoplasms occur with greater relative frequency than non-malignant ones, and that one in thirty of all women of thirty-five years and upwards dies of breast cancer; and one in thirty-five of uterine cancer. So much for frequency, and if now we for a moment consider the method of dissemination, say of mammary cancer, we are struck with the admirable arrangement for its general distribution. The lymphatics of the breast are ex-

ceedingly abundant. No other gland can compare with the mammal in that respect. The lymphatics are relatively more abundant than the blood-vessels and their anastomosis is very free. These vessels chiefly converge towards the axillary glands, following the outer border of the great pectoral muscle. Others from the deep aspect of the breast enter the chest, penetrating the thorax through the three upper intercostal spaces, establishing communication with the retrosternal glands and thus bring the pleura and mamma into intimate relationship. Lymphatics from the upper portion of the mamma sometimes pass directly to the infra clavicular and inferior cervical glands. Inasmuch as the spread of cancer is through the medium of the lymphatics, it can easily be seen that its dissemination from primary disease in the breast is easily accomplished. Metastasis from a mammary cancer is perhaps more rapid than in most organs, just as undisturbed uterine cancer has a tendency to remain localized longer than would be expected from its lymphatic supply. It is a matter of practical importance to determine if possible how soon after the appearance of the primary neoplasm the lymph glands become diseased. In case of mammary cancer Gross gives an average of about fourteen months. It may be very rapid, occurring almost coincidently with the primary disease, or it may be delayed years. Thus a woman may develop a nodule in the breast, and either from the terror which the thought of its possible malignancy may inspire, or deceiving herself by the recollection of some incident associated with its production sufficiently explanatory from her point of view, conceal the real state of affairs until symptoms of such character appear as warrant investigation. This investigation will perhaps show a hard nodule with or without axillary glandular enlargements. An operation is suggested immediately, if she is fortunate enough to fall into proper hands; too often, however, good men, conscientious and true, believing all they profess, take away any possibility of cure by holding out the alluring but thus far false hope of therapeutic cure. The patient finally as a dernier resort reaches the surgeon too late. From the foregoing explanation of lymphatic arrangement, dissemination, it will be seen, has occurred to an extent as to render complete extirpation of the disease a surgical or rather an anatomical impossibility.

It is rather remarkable that this age has produced no drug which so far as we have any positive knowledge has influenced even in the slightest degree the growth and development of cancer. One would imagine from a superficial consideration of the inroads of unmolested syphilis on the human organism, and contrast the results of its intelligent treatment by use of mercury and iodides, begun at a proper period, he would very easily fall into a train of thought on the possibility of the therapeutic cure of cancer. Such a blessing is probably reserved for another age, when the votaries of medical science will probably wonder at our ignorance and pity our helplessness. To-day our indication for treatment is: Early recognition and complete and radical surgical extirpation of primary focus and attendant parts of infiltration. The surgeon, however, is confronted oftentimes with a condition so far advanced, a system so overpowered by cachexia, as to render interference futile in the extreme. Or the neoplasm may involve an organ the removal of which is impossible. Such a case was presented to the writer, and the history was as follows: Mrs. G., aet 52, married, had borne several children, had been ailing for about a year, but supposed her condition was coincident to her time of life. It was not until uterine hemorrhage and an exceedingly offensive discharge sufficiently alarmed her that she sought medical advice. After having been treated by her family physician for some weeks, pending her decision as to an operation, during which time she failed rapidly in strength, she was seen by the writer. Examination showed internal cancer, well advanced. Cervix had disappeared, leaving large cone shaped opening extending into the uterus, involvement of both anterior and posterior vaginal walls, as well as infiltration of both broad ligaments. In view of the extensive involvement and apparent systematic involvement as evidenced by the cachexia, the writer advised against operative interference. Some weeks after, as a forlorn hope it was suggested to the physician to administer pyoktannin internally. This was done and a douche of pyoktannin was given daily. The result was surprising. The hemorrhage ceased and the offensive discharge was reduced to a minimum. The patient gained in flesh and for nearly two years was in a fairly comfortable condition. Experience in similar cases would lead one to give a prognosis of death in from three to five months, and this the extreme limit. The result of the drug in this case has led to its use in others, with varying results.

Pyoktannin or methyl-violet is an aniline dye, and was brought out by Stetting of Strasburg, who stated that it would penetrate tissues and act upon deeply imbedded pathogenetic micro-organisms. According to Shoemaker, when taken internally, it it excreted by the kidney, and the urine of patients taking the drug will remain aseptic for three weeks and that, according to Ehrlich and Leppman, given hypodermically it would relieve neuralgic and rheumatic pains. Von Mosetig and also Nanu claimed that its injection into the neighborhood of inoperable tumors retarded their growth and apparently cured others. Dr. Robt. F. Weir, of this city, gave it an extensive trial and abandoned its use, reporting negative results in the treatment of carcinoma. Maibaum, however, reports three cases of advanced cases of carcinoma of the stomach treated with pyoktannin. The drug was administered in grain doses three times a day, in pill form, or taken as a suppository with extract belladonna. In all cases the treatment was followed by marked improvement both in the local and general condition of the patients. There was subsidence of dyspeptic symptoms and increase of bodily weight. Marbaum concludes that pyoktannin arrests the disintegration of the carcinomatous growth and benefits patients suffering from cancerous cachexia. In most cases, the patient cannot take the full dose, as it pro-

duced decided nausea and vomiting. In such a case, reduction of dose and administration by rectum will obviate the disagreeable symptoms.

At the writer's suggestion Dr. M. S. Hopper, of Brooklyn, administered the drug in the first decimal trituration in a case of scirrhus carcinoma of the breast in a patient who declined operation, with prompt relief of pains, which were described as stabbing, tearing and burning. The patient supposed from its prompt action in relieving pain that it was an anodyne and declared that one or two doses was sufficient to relieve the distress. Dr. Homer I. Ostrom states that he has had no experience with its internal administration and has not seen any curative effects from its hypodermic injection into malignant growths, but in a case of enormous sarcoma of the neck, which was breaking down, its local use was the only measure that effectually destroyed a most annoying odor from the neoplasm. Dr. George S. Harrington kindly sends me report of a patient aet. 48, who in June, 1895, had undergone Halstead's operation for mammary carcinoma. In January, 1897, there was a recurrence at various points on the site of operation. The parts were dressed with successively iodoform and putonuclein, but this latter seemed to increase odor and had to be discontinued. The parts were then cleansed with peroxide of hydrogen, pyoktannin dusted on, and the dressing concluded with iodoform and plain gauze. After first dressing odor was practically gone. At different times large areas began to break down, but this condition was always arrested by the application of pyotannin, and the spot would apparently "skin down" again. While the disease was probably not arrested, the odor was stopped and the area of ulceration less than before it was used. The appetite was good and the patient did not suffer from acute pain at any time. At one time during the use of the pyoktannin the stomach rejected all nourishment, but this condition finally yielded to cocaine hydrocheor, 2 per cent. in ten drop doses. The patient finally died of exhaustion three years and four months after operation.

It will be noticed from the foregoing that pyoktannin certainly possesses virtues that might be helpful in a certain class of inoperable cases of cancer. Internally and locally it possesses some analgesic properties; it would appear that to a certain extent it arrested, temporarily perhaps, the disintegration of tissue. It is also a deodorant of considerable value, and perhaps a germicide of power far beyond the position it usually receives. The writer has found it very useful in cancer of the stomach, either primary or secondary, in arresting the fermentation and consequent production of flatus, which proves so annoying to such patients. It is clearly beyond the intention of the writer to offer this effort as a contribution to the numberless "cancer cures." Great harm could be done by the mere suggestion that any remedy, particularly a new one, had any curative influence on cancer, and the suggestion is made that as but little has been done in observing its action, taken internally, great relief might be obtained in inoperable cases by its intelligent and proper administration.

PRACTICAL POINTS IN THE TREATMENT OF PLEURISY.

By M. E. Fitch, M. D., Philadelphia.

IN the management of dry or plastic pleurisy it is occasionally the experience of the physician that the patient feels so well that it is only possible to keep him in bed by the strictest injunctions. But despite all protests he should be put to bed at once and kept there until all danger is passed. At the outset, the affection is often relieved by the application of cups, either wet or dry. It is my belief that wet cups are used too sparingly nowadays, simply because the doctor is anxious not to appear harsh in his measures. Or the abstraction of blood can be effected by the use of leeches, another means of treatment too little applied. Or in place of these means, the application of an ice-bag over the affected area has a very happy result. The ice acts as an antiphlogistic and often appears to abort the inflammatory process. But here again we find patients who object to the use of this method; there seems to be a widespread belief among the laity that cold applied to the chest will increase the pleuritic or pneumonic condition, and in this way cause death. When a physician encounters such opposition it is frequently better to resort to the use of counter-irritants. The best of these measures in my hands has been the mustard plaster, which produces a counter irritation without vesiccation.

Now of the methods employed in plastic pleurisy, one of the best is keeping the inflamed part at rest with strips of adhesive plaster. Broad strips, two inches in width, are applied to the side of the chest, starting from the sternum, each strip overlapping a part of the last. This gives great relief. The one objection to it is that it interferes with the physician's examination of the thorax.

Opiates may be given for relief of pain, one to three grains of Dover's powder every hour or two until there is perspiration or a drowsy sensation. Liquor ammoniae acetatis may be given in doses of one tablespoonful every two or three hours. These remedies, as a rule, are sufficient to control this simplest form of pleurisy.

The treatment of sero-fibrinous pleurisy, on the other hand, consists in the use of measures to absorb the effusion. The success of the treatment is gauged every now and then by the level of the effusion in the thorax. The chief drugs used belong to the classes of diuretics, purgatives, diaphoretics and alteratives. Not much is to be expected from the use of the first and second of these unless the amount of the effusion present is small. But one reason why some of them fail so often is that we forget to restrict, or the patient will not restrict, the quantity of water taken into the body at the same time. Among the diuretics used are the infusion of digitalis and the various preparations of squills. You must restrict the liquid elements of the diet. Following the method recommended by Matthew Hay, large doses of Epsom salts are given, one half ounce to one ounce and a half of the magnesium sulphate every morning, one half hour before breakfast, dis-

solved in the least possible amount of water. The effect is to produce copious watery stools. But manifestly this is applicable only to persons of a robust constitution. By extracting large quantities of serum from the body it acts as a depletive. Jaborandi and pilocarpine are the only djaphoretics that I have found of any value. They may be used alternately with the purgative in the manner recommended by Hay, but can be used only with robust patients. Iodide of potassium has been largely employed, and with apparently good results. Its absorbent properties are the indirect result of its diaphoretic action. The salicylates are often useful in pleurisy with effusion, because in many cases rheumatism is the cause of the disease.

Sodium salicylate may be given in doses of one to two drachms in the twenty-four hours, or five or ten grains every two hours, the latter being the limit which I usually employ. As it is unfortunately a drug decidedly nauseous to most individuals it is hard to administer, though this may be overcome by giving in capsules. The salicylate of strontium is highly praised by Prof. Wood, but I have not found it as good as the sodium salicylate.

Blisters have been much employed, but they are contra-indicated in weak individuals, and sometimes even in the robust may be superseded by thoracentesis. I have seen effusions disappear on the use of blisters, but very slowly.

If these measures fail, if there is a tendency in the effusion to increase, we should resort to thoraceutesis.

Now in general, the indication for thoracentesis will depend on the amount of effusion and the rapidity with which it is being poured out. In most cases it accumulates slowly, so that the lungs accommodate themselves to the pressure. But in other cases it is poured out suddenly, and under such circumstances we should puncture immediately, irrespective of the stage of the disease, no matter how early in the disease, and we may save life in this way. But as a rule there will be no necessity of doing this before the third or fourth week of the disease. The longer the lung is subjected to pressure, the greater becomes the danger.

In a case of emergency, if the usual apparatus is not at hand, the fluid may be pumped out of the chest by an ordinary Davidson's syringe to the end of which a large darning needle is attached. We are apt to forget that many years before the operation of theracentesis was described in Europe, aspiration for effusion was performed in the Massachusetts Hospital by Bowditch and Wynan. That this fact should be quite ignored by Europeans is unpardonable by us. If any student of medical history is interested in looking up the matter he—or she—can find Bowditch's article in the *American Journal of Medical Sciences*, of April, 1852.

Now, in performing the operation, it is impossible to remove all the fluid in the chest cavity; and it is not necessary, because as when a portion of it is removed, the remainder is more easily absorbed. It is not considered advisable to remove more than fifty ounces at one operation. I have, however, removed more than 100 ounces at one time without harm; while on the other hand I have been obliged to remove the canula when only thirty ounces has been taken away, on account of the presence of a violent cough. If the escape of the fluid is too rapid a violent cough may ensue and death from exhaustion take place.

The cough is due to an active hyperemia of the compressed lung. It is claimed that this may be prevented by a hypodermic injection of morphia. The peculiar albuminous sputum which is coughed up does not appear until twenty or thirty ounces have been removed, for the first quantity of fluid we remove is replaced by the return of the organs to their normal position. Now when these organs return, if we remove still more fluid, the resulting space can only be filled by an expansion of the lung. If then, on account of pain the lungs will not expand, the blood vessels become engorged with blood and serum is exuded into the alveoli. Now, if morphine is given the pain is stopped and the lungs are not prevented from expanding. Serum is not effused into the alveoli and the cough is prevented.

After removing a portion of the fluid from the thorax we should attempt to bring about absorption of that which remains, by using counter-irritants, purgatives and diuretics. Even if these same agents have been used in the earlier part of the disease, yet that is no reason for their being of no service now.

Now there is something to be said on the treatment of empyema or purulent effusion. It is largely surgical, if not exclusively so. Suppose that by an exploratory puncture we have found the fluid to be pus. Then the question is, Shall we remove the fluid by aspiration or by a more radical operation?

Now I think we should not decide on aspiration, because the fluid usually returns again and exhausts the patient's strength. With each day's delay the patient grows weaker. I will except children, when cure usually takes place after one aspiration. I would aspirate in children, but in older persons I would resort to the more radical operation. Then in patients that have been quite debilitated I would try the simple aspiration. They cannot always endure so well the free incision, with the resulting exhaustion. This seems a little contradictory. As a rule, though, there is not any reason to employ aspiration in robust adults, though I would in children and in weakly adults.

The operation consists in free incisions into the pleural cavity, and free drainage. The opening is usually in the intercostal space; but it has such a tendency to remain closed that it is generally better to resect portions of one or two ribs. This is not an insignificant operation, and it is apt to be attended with a good deal of shock. Yet, even in case of tuberculous pleurisy, the patient is often much better off for the incision. Murphy, with whom we associate the "Murphy button," advises for incipient phthisis inflation of the pleural cavity with air, so as to compress the affected lung and set it at rest. Now in cases of pleurisy with incipient phthisis, I should say that according to Murphy we ought to let it alone.

But the fact is that the lung often improves when pus has been removed and the lung expanded. So the clinical facts are not in accord with this theory.

Irrigation of the pleural cavity used to be practiced for empyema. A drainage tube was inserted, and every day we used to wash it out. Now this method has been abandoned except when the effusion is putrid, and even then it should be performed with the greatest care, on account of the dangers from emboli. So that irrigation is not regarded as safe by most authorities and should only be practiced when the pleurisy is putrid. When it is necessary use a solution of boracic acid, salicylic acid or thymol.

Complete cure of empyema can only take place by obliteration of the pleural cavity, and a requisite to this is contact of the two layers of pleura. In recent cases, where the lung has not lost its elasticity from long compression, this may be accomplished by the simple expansion. But in old standing cases, where the lung is capable of little expansion, cure can take place only by a sinking of the chest wall. And this gives rise to great deformity, in proportion to the amount of sinking in. In these cases the cure by union may be assisted by resecting portions of the ribs. So that, in the operation for removing pus, the amount of bone resected should depend somewhat on the elasticity of the thorax and the expansive power of the lung. One German has removed enormous quantities of bone from the thorax, claiming the best results from this method. But it seems to me that no rule can be laid down as to the amount that should be removed. It should depend on the elasticity of the thorax and the expansive power of the lung.

RELAPSES IN TYPHOID FEVER.

By J. Howe Adams, M.D., Philadelphia, Pa.

IT is often a matter requiring considerable care to make out the difference between a true and a spurious relapse following typhoid fever. Spurious relapses following typhoid fever are very common; they are returns of fever due to a variety of causes, such as errors in diet, excitement, constipation, emotion, etc. Recently, I called attention to another cause*—the little known condition of "post typhoid bed-fever," which is described as follows:

"After all other factors are dismissed, there thus appears to be a class in which as yet the cause of the return of the fever is unaccounted for, so that, for want of a better nomenclature, we may designate the condition 'post-typhoid-bed-fever.' The confirmation of this diagnosis depends on the disappearance of the fever on permitting the patient to leave his bed. The usual course of events is the opposite to this; we put patients to bed to rid them of fever; in this condition we take them out of bed to rid them of fever. Possibly there is some disturbing or annoying influence about the life in bed, on being freed from which the patient quickly responds to his generally improved state. Certainly, at the present the condition is little understood or explained by our teachers of medicine.

"The following case is a well-marked example: A lad in whom typhoid fever had run an average course made a good recovery from the disease; he was allowed to sit up for an hour or so a day for several days, when suddenly the temperature, which had been normal, started to bob up and down, showing an oscillation of several degrees in the course of twenty-four hours; the temperature-range extending from below normal to above 102 degrees. The boy was put back to bed, but this did not improve his condition at all; the temperature continued to rise and fall. There is nothing to account for it physically and mentally. After a week of this experience the boy was again allowed to get out of bed cautiously, and as his condition seemed to be no worse he was permitted to stay up longer, and in direct ratio, as he stayed up, his temperature steadied and lowered, until it finally became normal.

"There are two theories that seem at present plausible enough to explain this phenomenon; both are based on the instability of the temperature in convalescence. The first theory makes the process the manifestation of a pure neurosis, dependent on disturbance of the nerve centers presiding over heat-production and heat-dissipation. The other theory is that the lowering of physical activity tends to allow the accumulation of waste products in the body, so that the patient suffers from auto-intoxication. The condition may be much the same as that causing ephereral fever. Keeping the patient in bed at rest prevents him from breathing deeply, the lack of muscular movement interferes with the circulation of the lymph, and the heart gets no chance to tone up. Thus, there may be incomplete breaking down and elimination of effete matter, with the result, in persons with naturally unstable heat-regulating apparatus, of fever-production. In all cases in which it is possible the blood should be examined, and the relation between the white and red cells discovered. The greatest caution must be observed that an acute inflammatory process may not be masquerading under the disguise of post-typhoid disturbance under consideration."

The true relapse sets in after complete defervescence. Considerable difference of opinion exists among writers as to the percentage of relapses in typhoid fever; the one generally accepted is that of Liebermeister, which shows a 8 6-10 per cent. of relapses. In examining the question of relapse in typhoid fever, the following points should be noticed. It comes on after four or five days of freedom from fever. The majority of cases are not preceded by chills, and the fever attains its height quickly as a rule, and lasts generally from ten to twelve days. The eruption often, but not always, reappears. Whatever the symptoms are, they come on quickly.

It is the common belief now in the medical profession that true relapse should no longer be attributed to errors in diet. Da Costa states that he is almost prepared to say that such influences have no effect whatever in this direction. He believes that whatever symptoms comes from indiscretion and diet are chiefly the result of irritation. Relapses, to be genuine, must be caused by the re-ab-

* *Philadelphia Medical Journal*, November 19, 1898.

sorption of toxins, which have been concealed in the intestines, or somewhere in the economy.

Relapses should be treated exactly as the first attack, and, as a rule, the mortality of the relapse is not high. It is well to remember that hemorrhage is not apt to occur during the course of a relapse.

In Osler's excellent article on typhoid fever, in his "Practice of Medicine," he states that Da Costa has seen five relapses following typhoid fever. Since then Da Costa stated, in a recent lecture, that he has seen two cases, in each of which there were seven relapses.

In my estimation, possibly the most remarkable series of relapses in typhoid fever is recorded in a case attended by Dr. Joseph Leidy, Jr., in which there were three attacks of typhoid fever, and the third attack was followed by four relapses. The case is so interesting and so instructive that it will bear reporting here.

I. R., aged 34; born in Philadelphia; enjoyed excellent health until his sixteenth year, when he contracted typhoid fever (winter of 1873). The notes of this attack, taken from the case-book of Dr. Philip Leidy, describe a typical attack, extending over fifteen weeks, moderately severe, with frequent attacks of epistaxis. Spots were well marked, and there was considerable diarrhea during the first two weeks. Nervous symptoms were never prominent.

"The patient informs me that he never felt perfectly well during or after convalescence; to use his own words, he felt 'out of sorts,' and took medicine during the following summer, with little or no effect. In the early fall of 1873 he was treated for a slight diarrhea, attributed to some indiscretion in diet; though this was controlled, he again presented himself for treatment in the latter part of September, 'being run down.'" Upon a thorough physical examination, it was the opinion of Dr. Philip Leidy, who then attended him, that he was passing through a second attack of typhoid fever.

He was put to bed, given liquid diet, and placed upon expectant treatment. The area of splenic dullness was considerably enlarged, the abdomen was tympanitic, and presented several rose-colored spots. During this attack there were no complications, with the exception of obstinate tympanites, that resisted all medical treatment, but was finally overcome by the application of the ice-bag. The patient was confined to bed for seven weeks; his convalescence was rapid.

Until the latter part of January of this year he had enjoyed excellent health. Not feeling well at this time, he stopped work and left the city for rest, to return two weeks later unimproved. A week later he presented himself at Dr. Leidy's office for treatment; his symptoms at that time were suggestive of typhoid fever—"there was some hesitation in giving a positive opinion, knowing his previous history so well. He was put to bed, rest and quiet insisted upon; a liquid diet was directed, and quinine, two grains every fourth hour, was prescribed.

On February 27 the following condition is recorded: Great prostration; severe headache and backache; the tongue furred, moist and tremulous; the respiration 20; pulse 108; temperature 103.2; belly swollen, with tenderness, and marked gurgling in the right iliac fossa; area of splenic dullness increased; the first sound of the heart feeble, with a murmur (hemic) over the pulmonary cartilage; lungs negative. The urine was acid, with a specific gravity of 1020, amber-colored, with phosphates; no albumin or sugar was present, and the microscopical analysis was negative. There was sleeplessness, although nervous symptoms were not marked.

On the following day, February 28, several typical rose-colored spots over the lower part of the abdomen, and two on the left thigh, were noted. There was a profuse nose bleed in the early morning, and there was a marked tendency to diarrhea. The attack pursued a typical course.

The temperature chart showed no less than four distinct relapses. During the third relapse there was a profuse intestinal hemorrhage, so that the case appeared almost desperate. The patient, however, slowly recovered.

A question of much interest is the cause of the relapses, as they occurred during the attack. It has been suggested that the second attack of fever that this patient experienced, in the fall of 1873, was but a relapse following the first attack in the previous winter. The history of the patient's poor health, dating from the beginning of the first convalescence, in March, 1873, to the beginning of the second attack, in September, 1873, makes this theory tenative. That there was still some of the undeveloped poison lying latent in the system is highly probable.

During the third attack, every precaution was taken to prevent a relapse. The patient was under the charge of a skillful trained nurse, the diet liquid, and the water used was boiled. After the first relapse the supply of milk was changed, and afterward boiled. The intestinal symptoms were decided from the beginning. The only possible explanation appeared to be self-infection, or auto-infection. Dr. J. M. Da Costa, who saw the case during the third relapse, concurred in this belief.

As a case presenting auto-inoculation as an explanation for an unusual number of relapses during typhoid fever, the treatment by intestinal antisepsis naturally suggested itself. Under the administration of hydro-naphthol and turpentine, convalescence was more rapid and more satisfactory during the last relapse than during any of the others. This may prove to be but coincidental; nevertheless, it suggests a method of treatment not new, but worthy of further trial. The patient was confined to bed 145 days. At no time were there marked nervous symptoms or serious complications, with the one exception referred to—intestinal hemorrhage during the third relapse. The urine on several occasions contained albumin, but not in greater quantity than would be accounted for by the degree of fever. The case presents an instance of unusual susceptibility to the typhoid poison, with some points of interest to the etiology and treatment of relapses in typhoid fever.

THE DUCKING STOOL.—A bright little girl found in an old book a picture which she did not understand, and asked her grandmother for an explanation. The reply was: "That is a ducking stool, upon which in old times they fastened scolding women and ducked them in the pond." After looking at the picture for a moment she said: "Don't you think it would be nice to have one for mamma?"

THE USE OF THE GLYCERO PHOSPHATES IN EXOPHTHALMIC GOITRE.

By M. R. Miller, M.D., Philadelphia.

IT is well known that the actions of medicine in this disease are uncertain. There have been many combinations of treatment tried, such as that of digitalis and iron, and in cases where anaemia exists the administration of the medicine may be followed by improvement. Aconite and veratrum viride, the tincture of strothanthus, ergot and belladonna have all been warmly recommended in the treatment of this disease. In the hands of many authorities no measures have been so successful as the use of rest in bed, with applications of an ice bag or Leiter's tube, applied over the heart or lower portion of the neck. According to the experience of some well-known observers, electricity has been much praised, and instances of cure have been reported. I have a patient at present who was cured by the use of the galvanic current some ten years ago, and is to-day in perfect health, as far as the existence of this disease is concerned.

It will be impossible to treat this disease successfully until we know more of its cause; it is certainly accompanied by a functional disturbance of the vascular system, in addition to the exophthalmos and enlargement of the thyroid gland. According to some authorities the disease is regarded as a pure neurosis; by others it is regarded as due to a lesion in the medulla oblongata. Of late years, however, the view has been urged that it is primarily a disease of the thyroid gland. In support of this belief there have been published some interesting papers. Georgiewski has conducted some experiments which tend to prove that the symptoms of ex-ophthalmic goitre are due to hypersecretion from the thyroid gland. He fed dogs and rabbits with preparation of the thyroid gland and produced symptoms resembling those of this disease, tachycardia, increased respiration, polydipsia, glycosuria and general depression of the digestive organs and nervous system, although in none of these cases was he able to produce either exophthalmos or a goitre. Notthaft records a case in which a man took for obesity nearly one thousand five-grain tablets of thyroid extracts in five weeks. After the first three weeks he began to develop rapidly the symptoms of acute Graves' disease, including the eye changes and the goitre. The author believes from his examination of the study of literature that this disease is due solely to changes in thyroid gland.

As it appears to be the belief at the present day that such is the cause of the disease, naturally all energies are now devoted to attacking the supposed source of the disease.

Sänger questions the propriety of operating upon the thyroid in this disease, and emphasizes the danger of such operations. He reports a case of his own, in which he removed the right lobe of the thyriod gland; at first he thought he noticed a little improvement in the symptoms, but a little later he discovered that all of the symptoms were aggravated, and the condition of the case became worse than it was before the operation. The evidence on this subject is still so conflicting. that it is impossible for the investigator to come to any very definite conclusions, for, on the other hand, Kümmell reports fourteen cases of this disease, treated by partial removal of the thyroid. The majority of the cases were severe in their symptoms; twelve of the patients were completely cured and able to resume their occupations. In the other cases the operation was followed by much improvement. According to the experience of this authority, he believes that partial thyroidectomy in the majority of instances produces a cure which is permanent. In those cases in which there was complete extirpation of the thyroid gland it has been the common experience of operators to find that dangerous symptoms follow the operation. These signs are restlessness, rapid pulse, and rapid respiration, accompanied by considerable mental activity and often fatal results. The researches of Gull have shown that myxedema may follow extirpation of the thyroid gland. Murray's view is that the thyroid in exophthalmos compares with the changes which occur in an effort of compensation when part of the gland has been removed. The changes consist in the formation of alveoli, folding of the alveolar walls, which increases the epithelial surface and a change of the epithelial cell from cubical to columnar, changes which indicate that the gland is working at high pressure. In exolphthalmic goitre an increase of secretions is found, and the cells are columnar, which is the appearance of compensatory hypertrophy. Clinical evidence supports this view, for, in the latter disease, improvement has occurred when the gland is partly excised or some of its vessels. Carless believes that the belladonna treatment of exophthalmos relieves by diminishing the thyroid secretion. In two of the reported cases cysts were removed from the thyroid, and a considerable quantity of fluid escaped into the wound and was probably taken into the lymphatic circulation, and the symptoms noted were those of Graves' disease.

The author concludes, therefore, that there is an intimate relation between cases of this character and exophthalmic goitre, due to an excess of thyroid secretion in the circulation. The question can only be settled by experiment, and he urges the importance of guarding against the serious symptoms by taking as much care to prevent the contents of the thyroid cyst entering the wound as a surgeon does in dealing with a fluid tumor of the abdomen.

Wormser claims that the advantages of thyroidectomy are sufficiently great to counterbalance its possible dangers. The author's experience in Kocher's clinic, at Berne, has been very great, and he describes the operation of thyroidectomy as Kocher now does it, and states it affords the best conditions for establishing anasthemosis and avoiding injury to the recurrent nerve, and it leaves a portion of the normal glandular structure. According to Wormser, the disfigurement is slight, and relapse is impossible. At the same time fatal cases of this operation have been reported, which have been alleged to be due to the absorption of excessive amount of thyroid secretion.

In a report from the clinical department of the German Hospital, Philadelphia, an operation performed by Dr. J. B. Deaver. is as follows:

"Cystic goitre, male, aged 40; he had always en-

joyed good health. Twelve years ago a small soft growth appeared on the lateral aspect of the neck. It gradually increased in size, and there have been dyspnoea and dysphagia. The growth was carefully dissected out, all the vessels being secured prior to the division. It was found that only one lobe of the gland was involved. The pedicle was tied with silk, and the patient made a good recovery."

Lehotzky confirms the opinion of Kocher and others about the operation of thyroidectomy; he states that the operator should be careful to leave behind enough glandular tissue to obviate all fear of any cacexia.

While the concensus of opinion among operators, especially those of Europe, who have had extended opportunity of examining and operating on cases of this disease, tends to favor operation, yet it is well at the same time to determine if there are any medicinal substances which will have an influence upon the goitre. It seems to be the consensus of opinion that the use of thyroid extract is not of much value in the treatment of this disease. The author has tried it conscientiously in a number of cases without apparently any result, good or bad. However, he has had a greater degree of success in the use of the glycero-phosphate of sodium, given in conjunction with a liberal milk diet, and the use of rest. In several cases he has seen marked improvement; the condition of the patient is better, the thyroid glands are smaller, and the exophthalmos is markedly less. The drug is comparatively a new one in the hands of the writer, but he has reports from professional friends, in which they state that they have seen patients get well on this treatment. The treatment might be followed for several months, and then, if it is found to be of no benefit to the patient, the question of excision of a portion of the gland should be carefully considered. If it is true that the disease is undoubtedly true to overaction of the thyroid gland, and thus is really an auto-intoxication, it is only logical that the removal of a portion of a gland, by diminishing the production of the intoxicating agent, will benefit the patient. In closing, I would state that the glycero-phosphate of sodium should be given in doses of 20 grains three or four times a day.

ULCER AND ULCERATION.

By E. Franklin Smith, M.D., New York.

DEFINITION, Ulcer—A superficial loss of substance, with little or no tendency to heal.

Ulceration—Molecular death of a part, accompanied by the discharge of pus.

Classification of Ulcers.

1. Chronic non-infective ulcers. Those caused by local disturbance which interfere with the vitality of the part.

2. Chronic infective ulcers. Those caused by a virus, more especially that of tuberculosis and of syphilis.

3. Ulcerating tumors. Either cancerous or carcinomatous.

I. The Chronic Non-Infective Ulcer.

Causes. Local Causes.— (1) Varicose veins, interfering with venous return.

(2) Atheromatous condition of the arteries.

(3) Weak condition of the tissues, (hence, in old).

(4) Pressure from without, as exudations, etc.

(5) Cold, especially where nutrition is poor.

(6) Movement of the part.

(7) Interference with its contraction.

(8) Irritation of a sore.

(9) Septic condition of the discharge.

(10) Accidental infection of the wound.

(11) Deficient innervation of the part. (As perforating ulcer of the foot.)

Constitutional Causes.—(1) Diabetes.

(2) Scurvy.

(3) Disorders of the uterine function in neurotic women.

Varieties of Chronic Non-Infective Ulcers.

(1) Simple ulcer. Surface of sore fairly well covered with granulations; margins, sharp; surrounding parts, firm and œdematous.

(2) Inflamed ulcer. Seat of some irritation. Surface red, bleeds readily, much pus, extends rapidly, painful, margins of skin eaten away and so iregular.

(3) Irritable ulcer. In neurotic women with menstrual troubles. Base of ulcer elevated and tender.

(4) Weak ulcer. Granulations smooth, secretion thin, edges pale and flat. If a cause for general œdema exists, the edges may be œdematous. If there be interference with contraction of the sore, granulations may show excessive growth, "proud flesh."

(5) Varicose ulcer. At first usually small and superficial, resembling simple ulcer with œdema around; later, tissues become thicker, leading to "callous" condition.

(6) Callous ulcer. Tissues around the ulcer thickened and hard. The base of ulcer is deep, fixed and contraction is impossible. Surface pale, with few granulations. Margins thickened, elevated and white.

(7) Hemorrhagic ulcer. Surface swollen, red and bleeds.

(8) Diabetic ulcer. Spreads rapidly, skin red and inflamed.

(9) Ulcers, the result of pressure. Marked thickening of the epidermis around, sore below the level of skin, very vascular, tendency to exuberant granulations.

(10) Ulcers due to deficient innervation. Ulcer may reach the bone, which may become the seat of a rarefying osteitis. It may be funnel shaped, base with reddish granulations, secretion foul. Epithelium may spread down sides, epidermis proliferates, cavity of ulcer filled with decomposing epidermis.

(11) Phagedænic ulceration. Exceeding rare.

Treatment of Chronic Non-Infective Ulcer.

A. Get rid of the various causes which are keeping up the ulceration.

B. Improve the condition of the surface and margin of the ulcer.

These principles may be arranged under four heads:

(1) Rest in bed with elevation of the limb, so that

the sore is at higher level than the heart. Massage, using it first above the ulcer. Pressure, by means of bandage; not so good as rest with elevation.

(2) Get rid of all the causes of irritation. Use weak and unirritating antiseptic solutions. Remedy the septic condition by disinfecting the skin around the ulcer as well as the surface of the ulcer.

(3) Treat the ulcer subsequent to its purification with boric lint wrung out of saturated solution boric acid applied continuously, oiled silk being interposed between it and the ulcer. Change dressings daily.

(4) Heal rapidly with as little contraction as possible, to obtain a sound scar. This is best accomplished by skin grafting.

Skin-Grafting.—(a) Hamilton or Reverdin. (b) Thiersch. (a) Hamilton or Reverdin method consists in spreading upon the granulating surface minute portions of epidermis which have been shaved off from some convenient region. Ulcers heal rapidly but the scar is weak.

(b) Thiersch method consists in removing about one-half the thickness of skin by means of a razor; the strip may be anywhere from one to twelve inches long. The granulations should be aseptic and healthy. No antiseptic solutions should come in contact with the grafts.

Treatment of Special Forms of the Chronic Non-Infective Ulcer.

Inflamed Ulcer.—Free incision into the margin of the ulcer, so depleting the part and allowing the escape of exudation. If bridges of skin are present, cut them across. Apply boric fomentations.

Irritable Ulcer.—Destroy the surface of the sore thoroughly with nitrate of silver and attend especially to the menstrual functions.

Weak Ulcer.—Seek for and remove the cause, especially adhesions of the ulcer to the bone beneath. Where other means fail resection of a bone or of a joint, permitting contraction of the sore, results favorably.

Varicose Ulcer.—Treat on the lines already laid down; then cure the varicose veins by operation.

Callous Ulcer.—First get rid of the callous condition around the ulcer. Rest, with elevation of the leg and sore rendered aseptic, sometimes results in the disappearance of the callous in the course of two or three weeks. One or two blisters may expedite matters; it causes inflammations with an increased circulation through the part and more rapid absorption by the lymphatics.

Another method is by pressure, by strapping or Martin's rubber bandage. Also, by massage, first endeavoring to get rid of the effused material above the ulcer and then below. In the poor who must be treated as out-patients, Unna has introduced, instead of the Martin's bandage, an arrangement by which the ordinary bandage is stiffened—so that they maintain their position and support the part. He disinfects the skin, washing with soap and water, then uses antiseptic lotions, and applies to the sore and surrounding parts iodoform. A double-headed bandage is then applied to the limb, commencing from the middle of the sore. The bandage is porous and over it he rubs a mixture of gelatine and glycerine, as

Gelatine	parts 10
Water	parts 40
Glycerine	parts 40
Oxide of zinc	parts 5

This is mixed and rubbed into the bandage, and before it is set another is dipped in hot water and applied. This dressing solidifies and makes a support for the limb; it is not so heavy as plaster of paris and the pressure is more evenly distributed than with Martin's bandage. Remove the dressing every day by dipping the leg into a pail of hot water.

Paralytic Ulcers.—Stimulating applications, more especially the spirits of wine, should be applied.

Perforating Ulcer.—Cut away the edges and sides of the ulcer freely, scrape the bottom of the ulcer and stuff the whole cavity with cyanide gauze, sprinkled with iodoform.

Phagedenic Ulcer.—Scrape away the phagedenic material and then cauterize freely by means of the actual cautery.

II. The Chronic Infective Ulcer.

(1) Tuberculous Ulcer.—Characterized by marked undermining of the edges. Surface of ulcer pale, without proper granulations, with caseating material here and there.

(2) Lupus.—Base of ulcer soft and pale with imperfect granulations, around edges of sore nodules which break down.

(3) Syphilitic Ulcer.—Result of ulceration of gummata. Early period, circular and punched-out appearance; later, assumes a serpiginous form, healing taking place on one side, while ulceration occurs at the other.

III. Ulcerating Tumors.

(1) Sarcomatous Ulcer.—Result from growth of sarcomata beneath the skin; ulceration due to pressure. It is a fungating tumor protruding through a hole in the skin, the sides of which are inflamed but do not present the characteristic clinical features of sarcomatous disease.

(2) Cancerous Ulcers.—Below level of skin; base hard or warty; edges hard, elevated and sometimes warty.

(3) Rodent Ulcer.—This is now known to be simply a form of superficial epithelioma. Base red and depressed without any granulations, somewhat indurated; edges hard, sharply cut, and may be warty.

Nursing During Pregnancy.—In his inaugural (Thése De Paris, 1898) Dr. P. Capart takes occasion to contradict the prevalent idea that nursing during pregnancy is hurtful to the mother and to the child. He believes it to be a mistaken doctrine that rachitis, gastro-enteritis, and even the death of the infant can result from continued nursing at this time. On the other hand, he shows that in our animals the milk is usually increased in amount or remains about the same up to a very short time before parturition. He also quotes the analysis of Boudin and Capart, to show that the chemical composition of the milk undergoes no appreciable change. He concludes that, contrary to the prevalent idea, nursing should not be discontinued when pregnancy occurs. The colostrum stage does not return with the advent of a new baby, and further, if the older child does not seem to get enough nourishment, it is well to add some food by means of the bottle.

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Cowardice is rare in our race. There is, however, a higher kind of courage, which, at the expense of calumny and obloquy, seeks fearlessly to make known the truth.—PRESIDENT ELIOT.

MARTYRS FOR SCIENCE.

EVERY department of life is full of brave deeds, of devotion to duty, of forgetfulness of self, of true heroism, but we know of no more touching, soul moving story than is recorded of the sickness and death of Dr. Franz Herman Mueller, the young and brilliant lecturer in the Vienna University, and phyician at the General Hospital. So little was known of the real character of the plague which was raging in India with fearful fatality, and so great was the fear that it might be conveyed to other parts of the world, that the Vienna Academy of Science, two years ago, sent to Bombay an expedition of scientists to study the disease and obtain such facts as they could gather by personal observation of its habits, pathology, and treatment. This expedition, at the head of which was Dr. Mueller, remained in Bombay three months. Regardless of the danger to his own health Dr. Mueller visited the plague haunted dens, observed by the bedside more than a thousand cases of plague, and, with his associates, dissected dozens of bodies, trying to wrest from the grasp of death the secret of the scourge which was decimating the land.

On their return to Vienna Dr. Mueller continued in his laboratory the study of the plague bacilli which he had brought from India, trying to ascertain in what way the germs entered the organism, and how immunity from the pest could be obtained. There was a hospital attendant who, in assisting Dr. Mueller with the bacilli, was careless in his work and contracted the disease. He was carefully attended by Dr. Mueller, who also contracted the disease. He had watched so many attacks of plague from the inception to the close, that with the appearance of the first symptoms he diagnosed his case correctly. Knowing that he was doomed, that death was near at hand, he considered himself solely a subject of study, and all his thoughts were directed to the interests of science. Every quarter of an hour he wrote the observations he had made on his own body, registering every varying change, the respiration, the pulse-beats, and the fever curves. When he was no longer able to register himself he dictated, with stuttering tongue, to the Sister of Mercy who had come to nurse him, remarks of a purely scientific interest, made on his own body, in order, as he said, they might be useful to other doctors in studying the disease. These observations only ceased when the agony of death set in, which he met with the bravery of a man who had no thought of his own sufferings, but only the good of others.

In the last hours of the illness, which lasted only two days, he wished to receive the last sacraments. The priest, who was not allowed to go in, for if he had done so he would have had to be isolated for a considerable time, appeared before the closed window of the ward and gave the dying man absolution. Wrapping the Host in the napkin covering the cup, he laid it on the outer window sill, from where it was handed to the patient by the Sister of Mercy.

Professor Von Frankl closed a touching funeral oration with the words: "Short was thy career, but thy life was a full one, for it was a hymn of praise to the two high powers, faithfulness to duty and moral courage. Not in vain didst thou live. Thy name is inscribed with the names of the great company of martyrs for science."

A monument has been erected to the memory of Dr. Mueller in the arched court of the University.

INDIAN POISONS.

SOME of the most useful vegetable poisons in our materia medica came to us through the observation and experience of the aborigines, which include antidotes to animal and vegetable poisons, and poisons whose quick or slow action is accompanied by intense suffering, and sometimes death. The conjurers or medicine men of the Cree and Salteaux tribes of Indians, in the northwestern regions of British Columbia, on the border of the Eskimo land, a thousand miles north of Winnipeg, brew deadly mixtures from plants of which no one knows the secret but

themselves, more sure and deadly in their action than any known to science, defying all antidotes and all efforts to relieve. The poison secret is confined to the conjurers of these two tribes, few in number, and to which admission can only be obtained through a long and severe training.

One who would enter the conjurers' mystic circle must retire to the summit of the highest cliff and remain there night after night for months, holding solemn communion with the stars and clouds and winds. This is supposed to give him a profound grasp of the mysteries of nature, which are all potent in the conjurers' art. During the daytime he lives concealed in some mountain cave, starving himself so as to be more receptive to the message from the stars and the winds. After months of this life, through which only a few can pass, he returns to his tribe a living but inspired skeleton, and is invested with the secrets and sanctity of what might be called the "College of Poisons," for preparing and dispensing these poisons form the chief work of the conjurer. Those tribes never go on the war path. They make no use of the tomahawk or the scalping knife in dealing with their enemies and use no intoxicating liquors, but reach their enemies through poison administered in the food and brewed by the conjurers. It may be months before it begins to show its effects, and whatever time of the year it is given it never begins to operate till spring.

Dr. Meldon, of Manitoba, describes the action of the poison, as witnessed by him in many cases, and in one in which he made every attempt to relieve the patient, but found that science was utterly helpless in the presence of this fatal brew of an Indian conjurer.

The first sign is the appearance of sores on the body and especially on the face of the victim. In the course of a month the sores apparently dry up and are followed by scabs. But that is the seeming calm before the storm, for in the course of a few months more, during which the victim suffers indescribable tortures, the scales drop off, and in their places great tufts of hair spring up. Then follows the last stage before death in its most agonizing form.

These tribes have wonderful powers of endurance and great speed in running. Sometimes, as guides, they have kept ahead of dog sleds for a hundred miles, the plants which they gather in the woods giving them a phenomenal strength and endurance.

THE "Ergograph," a reported invention from Chicago, claims to measure the "capacity for study and the ability to withstand fatigue," of course mental. If borne out by experience it may be an important agent in preventing the "slaughter of the innocents" by over-study, to which we referred in our last. This machine will enable educators to individualize their pupils for study, in a manner never before attempted. The possibilities would seem almost limitless, should this machine prove practicable.

NITRO-GLYCERIN: GLONOINE.

IT is an interesting fact that a chemical product which in recent times enters so largely into the composition of the most powerful explosives, such as dynamite, Judson powder, explosive gelatine, giant powder and smokeless powder, should be recognized and so largely used in certain affections of the heart and cerebral circulation.

Glonoine, or nitro-glycerine, as it is generally called, was discovered in 1874 by Mr. Sobrero, who noticed when intent on the production of gun cotton, that glycerine, when treated with a mixture of sulphuric and nitric acids, at a low temperature, yielded an oily liquid almost insoluble in water, but readily dissolved by alcohol or ether. According to this author, the smallest quantity of the compound was sufficient to produce the most violent headache, especially in front, but quickly subsiding, from which he concluded it would prove a most dangerous poison. The subsequent investigations of Dr. Vrey, of Rotterdam, Holland, and Mr. Redwood, were attended with the development of other symptoms pointing to angina pectoris and other neuralgic conditions. These symptoms were sufficeint to attract the attention of Dr. Constantine Herring, of Philadelphia, who made an extended proving of the new compound, and introduced it into the Homeopathic materia medica, under the name of glonoine. After this substance had been used some time as a therapeutic agent by the Homeopathic practitioners of America it was brought into more general notice by the publication of the results of some experiments which had been made with it by Mr. Field, of Brighton, Dr. Fuller of St. George's Hospital and by Dr. Harlay, of University College, which results were published in the *Medical Times and Gazette*. Many excellent provings have been made of this drug, notably by Dr. James Sembke, of Riga; Dr. Rice, of Halle, and Dr. Dudgon, of England, whose observations were recorded in *The British Journal of Homeopathy*, April, 1853. These provings have recently been verified in a very marked degree by Dr. George C. Laws, who furnishes a very excellent article upon this subject in the January issue of the *International Clinic*, published by

Lippincott & Co. As a physician, Dr. Laws has had the opportunity of noting the effect of nitro-glycerine upon the workmen in a large manufactory near his residence. All the workmen suffer at first with the most intense headache, which usually passes off in about a week's time, as they become accustomed to the poison. The workmen's wives, and others who do the laundry work, suffer in the same way. Dr. Laws remarks that when nitro-glycerine is taken into the system by absorption or inhalation, it acts on the vasometer centers, causing dilation of the left side of the heart and of the entire arterial system.

There is often a distinct reddening of the skin of the face and extremities, sometimes of a pinkish hue, which occasionally increases to lividity and blueness of the finger nails, lips, ears and nose, with conjunctival injection. Along with this there is palpitation, even thumping of the heart; pulse slightly quickening, soft and compressible, and an intense throbbing pain in the head, extending down the back of the neck; at every pulsation of the heart the blood can be felt surging through the brain, and in aggravated cases the movement of the blood can be felt in other parts of the body. Nausea and vomiting are often present and sometimes diarrhœa. Weakness and prostration are always present, and languor continues the next day.

It will be seen that these conclusions, drawn from the closest observations and the most scientific study, are on the same line as those previously reached by provings, indicating clearly the general action of the drug and its therapeutic use.

Dr. Laws' study of the action of nitro-glycerine upon the workman leads him to the conclusion, which is well worthy of the most careful investigation of army experts in explosives, that smokeless powder, which contains 50 per cent. of nitro glycerine, may exhibit its poisonous qualities in the rapid firing on the battle field. If the entire combustion, he says, is never complete, as is more than probable, a certain percentage of nitro-glycerine is diffused undecomposed in the atmosphere, exerting its poisonous, prostrating influence upon the soldiers themselves. In the navy, with the vessels in motion, and the guns discharging outside the turrets, there might be no appreciable poisonous effect upon the crew. The powder used by the Spaniards in the Mauser rifles at Santiago contained a high proportion of nitro-glycerine, and possibly, if the bulk of smokeless powder grains was not rightly proportioned to the caliber and length of the bore of the guns some of them would fail to be consumed, but, falling on the ground fill the air with their poison gases, which may, to a certain extent, have been one cause of the lack of sustained fighting strength on the part of the soliers.

QUININE IN MALARIA.

THE opening of the vast territory in the Philippines and West India Islands, which has recently, through the fortunes of war, for a time at least, come under our protecting care, to the prospective colonization of our people, has naturally turned the attention of scientists to the diseases from which new comers would most likely suffer. Prominent among those is, of course, malaria, and the question would naturally arise, Have we in quinine a universal and unfailing specific? An article in a recent number of the *News* urges the universal use of quinine in malaria. And yet this is by no means the opinion of men north and south, wherever malaria prevails, who have studied the matter carefully and have the most individualized their cases. It has often been found that when quinine has been given in combination with other drugs results have been obtained in controlling the disease which quinine by itself has utterly failed to accomplish. However valuable quinine may be in malarial conditions, and no one can doubt its value, or its specific action in very many cases, yet the closest observers admit that each case should be individualized and the size of the doses governed by the condition and surroundings of the patient. In very many cases the physician will find when the quinine utterly fails the desired result will be obtained by other remedies, such as arsenic, eupatorium, eucalyptus, methyline blue or phenic acid.

Koch states that quinine was given so freely in African malarial fevers as in some cases to produce black-water fever and marked nephritic trouble. Malarial poisoning undoubtedly may cause nephritis, with the after accompanying conditions of albuminuria and hematuria, and there is abundant evidence to show that quinine, unwisely administered, may irritate the urinary organs, producing the very conditions not unfrequently observed from the effects of malaria. But this condition simply shows that the toxic action of the drug has been obtained and if given in smaller doses, the result would have been soothing, tonic and curative. We have seen repeatedly cases where the tincture of cinchona, a drop or a few drops at a dose, would produce relief where its alkaloid would only irritate and aggravate.

A celebrated, artist whose pictures were noted for their brilliancy and beauty of color, when asked with what he mixed his tints to produce such natural and lasting effects, replied: "With brains,

sir, with brains." Possibly in many cases if quinine were mixed with brains the results would be all that could be desired.

THE EARLY DIAGNOSIS OF MALIGNANT UTERINE DISEASE.

THE well-known "trinity" of symptoms which have always been insisted on as diagnostic of cancer of the uterus in its incipient stages, are pain, cachexia, and foul discharge. When these are absent, any other abnormal symptoms or conditions occurring at or near the menopause are generally regarded both by the patient and family physician as merely a part of the ills which female flesh is heir to at that period, and recovery is expected and promised when the "change" shall be over. This, as Dr. L. Grant Baldwin very clearly shows (*Med. News*, March 5, 1898) is a deplorable mistake. In cases of malignant disease of the uterus these grave symptoms are late in appearing. When any one of them is present to any considerable extent it will matter little whether or not a diagnosis is made, for the patient will have left behind the hope of successful treatment weeks if not months before. This is because, the uterus not being a highly sensitive organ, and having no connection with the chylopoietic viscera, but slight inroads are made on the patient's general health until adjacent structures are implicated. That uterine cancer gives rise to a peculiar smell, Dr. Baldwin does not believe. The only sign, in fact, upon which he lays stress in this connection, is *hemorrhage*. In all cases which he has observed, bleeding has been the earliest symptom. Another early symptom may be an inter-menstrual watery, irritating discharge, but not necessarily foul-smelling. Nearly every case coming under observation at a period of the disease sufficiently early for total extirpation of the uterus to offer any reasonable hope of a cure, will require for diagnostic purposes a preliminary scraping and a microscopic examination of the material removed.

TARTAR EMETIC IN VARIOLA.

IT is a well known fact that the external application of tartar emetic will produce a pustular eruption somewhat similar to that of variola. This fact suggested to us many years ago the internal use of the drug in variola, and it was used in very many cases with greater benefit than any other remedy. Smallpox has recently been epidemic in portions of Arkansas and New Mexico. Dr. I. M. O'Connell, health officer for Dona Ana County, New Mexico, writes that in thirty-three cases in which tartar emetic was given in variola the results were highly gratifying. In all cases treated in this way the secondary fever was shorter in duration and less severe than in those in which it was not given. There was a complete absence of pruritus without local treatment and little or no pitting, the skin generally returning to its normal condition. Comparison was made in the treatment of children in the same family, one with tartar emetic and the other with the routine treatment, very much in favor of the former. He found by experience, as was also the case in our own, that small doses, about the one-hundredth of a grain, repeated every two or four hours were much the most effective, large doses, from a tenth to one-thirtieth of a grain, often producing marked aggravation of symptoms.

THE LAND OF THE PYGMIES.

In the Congo Free State, which is a territory about the size of India and containing a population of about 42,000,000, we can trace in the different tribes a process of development from what would seem the lowest form of human life. In the pygmies, as described by Captain Barrow, it would seem we have found the closest link to the original Darwinian ape extant. They are of lighter complexion than negroes, with dark brown hair, and of very small stature. They have no settled place of abode, living with first one tribe, then another. They have no cooking utensils, their food being roasted or smoked. They eat as much as two ordinary full-grown men, and consequently a characteristic feature of the race is a distended abdomen. Their low state of mental development is shown by the fact that they recognize no family ties, such as father, mother, sister, or brother; have no regard to time; no fixed home or religion, and while capable of speech, in point of intelligence and reasoning power are only one remove from the ape. Then come tribes with a higher grade of reasoning power, a more fully developed form, but instincts of the most brutal animal character. The Bangala not only feast on bodies slain in battle, but kill their prisoners and slaves. Three days before the killing his limbs are broken, after which he is placed in a pool of water, his head being fastened to a log so that he may not be drowned; on the third day he is taken out and killed. This process is supposed to make his flesh tender. The skin of the slain is used for drum heads, the teeth for necklaces for the women and the heads stuck on poles near the tribal village. With the recent discoverers of bones in the Malay Archipelago and the opening of the dark regions of Africa the evolutionists would seem to have no difficulty in supplying

the links between the animal and the human, from its lowest to its highest forms of development by climate and cultivation.

A NEW HOSPITAL.

A HOSPITAL on a new plan is being organized in Brooklyn, to be called the Bread-winner Hospital. The work on the building will be commenced as soon as $300,000 have been subscribed. The best beds will not cost more than ten dollars a week and from that down to a merely nominal sum. Every patient admitted is expected to pay something, so that they will not consider themselves subjects of charity. A system of private rooms will be adopted instead of beds in wards. It is not expected the institution will be entirely self-supporting, but will have a sufficient endowment to place it upon a good permanent basis. Dr. Skene, who has been connected with the Long Island College Hospital for thirty-seven years, and is known throughout the profession as an author, teacher, and skilled gynecologist, will be at the head of the Medical Board. The general idea of the hospital is an excellent one, calculated to meet the wants of a large class of our citizens who cannot afford large prices, but do not wish to be considered subjects of charity.

CARBOLIC ACID: PHENIC ACID.

THE use of carbolic acid is of comparatively recent date, but notwithstanding as an antiseptic and disinfectant other preparations, such as sanitas, have to a certain extent taken its place, in certain diseased conditions of the tissues it has no equal. The acid has recently become a favorite with would-be suicides, notwithstanding the extreme agony attending its corrosive action. In alcohol and vinegar we have recently discovered antidotes to the poison, if taken in time, applied externally, or given internally, if the acid has been swallowed.

In the poison ivy, or rhus poisoning, so common in the country, where the vine is found in abundance, twining around trees or running along walls or fences, a continuous application of a 2 per cent. solution of the acid to the inflamed parts gives prompt relief.

A similar solution acts equally well in burns, the inflammation rapidly subsiding under its influence.

Like every other drug of a wide range of action, its value in some cases has been over-estimated. It will be remembered several years ago phenic or carbolic acid was recommended by Declat, of France, as a specific for cancer, but an extended trial proved it an entire failure, or at least only a palliative. Given in typhoid fever it acts as a powerful antiseptic, and in malarial fever to a certain extent as an antipyretic. Malarial cachexia is often materially relieved by its use.

In chemical combination with salicylic acid, in the form of salol, its action in relieving gastric and intestinal fermentation is probably that of an antiseptic, the combination separating in the intestinal canal into its original parts.

Carbolic acid, or phenic acid, is undoubtedly one of the most important of all the coal-tar preparations, and in its various combinations has a range of action the limit of which has by no means been reached.

CHEMICALLY PURE WATER.

WHEN we speak of pure water for drinking purposes we do not mean chemically pure water, in which there are no mineral salts or gases held in solution, but water free from all animal or vegetable substances. Such water does not generate bacteria, and if protected from the atmosphere will remain pure for years.

It is very difficult to obtain perfectly chemically pure water, even by distillation. Hans Koeppe says the purity of water, as tested by electric conductivity, in ordinary spring water, shows, on the scale employed, 500 or 600, while chemically distilled water gives only about forty-nine.

Distilled water, taken as a drink, containing but a small amount of salts, on reaching the stomach extracts these from the animal tissues, giving rise to gastritis and catarrhal inflammation.

Dr. Koeppe illustrates the poisonous qualities of chemically pure water by the spring of Gastien, which is known as the "poison spring," and is so nearly pure that it has an electric conductuity of thirty-one; that of ordinary distilled water being forty-nine. From these facts we see that however valuable distilled water may be in manufactured mineral waters in which saline material is supplied, it should be avoided for drinking purposes.

THERE has been an extraordinary decline in the number of young men who have joined the medical profession in England during the last year, according to the "Medical Directory." The last issue of this volume shows that the increase in numbers is only ninety-one, while in the previous year it was 619. The English press argues that this condition shows that the over-crowding of the profession is appreciated and the difficulty of finding openings has discouraged young men from studying medicine.

It would be a good thing if the young men in this country could come to a realizing sense of the crowded state of the profession, and the difficulty in finding places where they can even make a living.

There are at least 50 per cent. more practitioners in this country than there should be for the good of all concerned.

CONSERVATIVE UTERINE SURGERY.

DR. A. PALMER DUDLEY, of this city, has recently published several articles on "Conservative Surgery of the Uterine Appendages," which certainly show an immense advance in this line of treatment. His clinical reports indicate that all sound tissue should be retained within the pelvis, and that in the majority of cases operated on, sufficient ovary may be retained to continue the function of menstruation, and hence admit of the probability of child-bearing. Dr. Dudley concludes as follows:

"My reasons for having devoted myself to such work are:

"1. That I believe that no surgeon can anticipate just what effect an early induction ot the menopause by ovariotomy will have upon a woman's nervous system. Some it will affect in one way, some in another; some will put on flesh, some will lose it; some will be cheerful and contented, others will be melancholy. In many cases the domestic relations are destroyed by the knowledge of the husband or wife that she is not a perfect woman, and that what every woman should have preserved, if possible, she has been deprived of.

"They all suffer more or less from hot flashes, and in many cases the latter become a very troublesome condition, the heart palpitation and hot flash creating a constant fear of future evil. Many times in the past I have had my patients return to me and complain that these nervous symptoms were dreaded much more than the condition for which I did the operation, while expressing a regret that they had ever undergone the same.

"Another reason for my work is a belief that pelvic surgery should not be compassed about by the opinion even of a majority of the profession; that hysterectomy is the last resort in order to effect a cure. We must progress, if possible, for the design of surgery from the beginning was to save and not to mutilate the human body. This should be constantly borne in mind by every fair-minded surgeon, and I predict that if any advance is made during the next ten years it will be along this line of conservative surgery upon the appendages."

IN justice to the New York Homeopathic Medical College, we are requested to announce that the faculty of that college has positively refused to admit any students credited to the "Institute of Somatopathy," as quoted in our last issue from the prospectus of that "institution." This correction makes the "Institute of Somatopathy" appear in a worse light than before, as the statement was false, and now it would seem as if their "prospective students" would have to go without "Anatomy, Physiology and Pathology." We are glad to find that the college has declined such association.

THE State Boards of Medical Examiners report that from 1892 to 1899, 3,972 candidates have been examined for the license to practice, and that 922, or 23.2 per cent., were rejected. Of this number 3,614 were unsectarian graduates, of whom 858 or 22.4 per cent., failed to pass, 277 were Homeopathic, of whom 48 or 17.3 per cent., were rejected, and 81 Eclectics, with 16 or 19.7 per cent. rejections. In 1898 25 per cent. of the candidates were rejected!

There must be a lack of uniformity in these examinations or there would not be so much discrepancy between the different boards in their rejections.

It is encouraging to see that so many were rejected in 1898, although we fail to see the reason why. There are too many physicians in the State already.

WE hear of no progress being made recently in the matter of reciprocity in State medical examinations. We had hoped that before this at least, some plan would have been devised between the States which have similar requirements.

It seems absurd that a pracitioner who is regularly registered in one State cannot legally practice in another where the requirements are practically the same. It would seem as if this might be brought about and save much annoyance to those who ought to be entitled to practice where they please without violating law. Personally, we have no interest in the matter, but there are many who have, and they should push the subject to an issue.

LORD CURZON, the Viceroy of India, in a recent speech in Calcutta, referred to the science of medicine as the greatest boon the West had given to the East. He quoted Rudyard Kipling's verse, "Take Up the White Man's Burden," ending "and bid sickness cease," and assured the audience that Lady Curzon was determined to do her utmost to brighten and alleviate

the lot of the women of India. Both the Viceroy and his wife are very popular in India, and there is no doubt the immense influence of their position will be wisely used in ameliorating the condition of the people.

A COMPLIMENTARY dinner was given to Dr. Horace M. Paine at the Fort Schuyler Club, in Utica, March 10, on the anniversary of the fiftieth year of his entrance into his profession. Ex-Surgeon General Terry officiated as host, and acted as toastmaster. Ex-Surgeon General Watson, the life-long friend and active co-worker with the guest, gave a graphic description of the important work which had marked the professional career of Dr. Paine, and its influence on the legislative action in this State, particularly in reference to medical reforms. One of the most pleasing incidents of the evening was the presentation of a "loving cup" to the venerable and distinguished guest. To the few well chosen and graceful words with which the presentation was made by General Terry the recipient responded briefly with a voice trembling with emotion. In the erect form and earnest voice of Dr. Paine there was but little trace of the hard labor, physical and mental, of a half century of professional life, during which heart and soul had been given to his arduous work. As the loving cup passed from lip to lip around the table there went with it the benediction of all, and the earnest wish that the closing years of a life which has been so rich in results might be full of happiness.

BIBLIOGRAPHICAL.

AN AMERICAN TEXT-BOOK OF DISEASES OF THE EYE, EAR, NOSE AND THROAT. Edited by G. E. De Schweinitz, A.M., M.D., and B. Alex. Randall, M.A., M.D., Ph.D. Illustrated with 766 engravings, fifty-seven of them in Colors. Philadelphia: W. B. Saunders, 1899. Cloth, $7.00 net.

This book is a continuation of the "American Series of Text Books," published by Mr. Saunders, all of which have gained a marked and desired popularity, not only in this country but wherever the English language is spoken. Six hundred and fourteen pages are devoted to the eye, and include its embryology, anatomy, histology, physiology. Its diseases and injuries are discussed in twenty-four sections, by twenty-four authors; its operative surgery in seven sections by as many authors, while certain practical details in the examination for color blindness of railroad employees and others receive attention in an appendix containing four sections. In the 200 pages devoted to the ear its anatomy, physiology, diseases and injuries are discussed in thirteen sections, by fourteen authors. In the remaining 400 pages the diseases of the nose and throat are described in twenty sections by nineteen authors. Certain novel features not usually noted in text-books may be noted. Special articles on the standards of form and color vision required in railway service, the Roentgen rays in opthalmic surgery, the practice of opthalmic operations on animals' eyes, the most important micro-organisms having etiologial relationship to ocular disorders, etc. The work is essentially a text book on the one hand, and on the other a volume of reference, in which the practical side of the question is brought into prominence; the articles all being prepared by men who are recognized as authorities on the subjects treated. The engravings, of scientific correctness and artistic clearness and beauty, are of great value in illustrating the text.

AN EXPERIMENTAL RESEARCH INTO SURGICAL SHOCK. An Essay awarded the Cartwright Prize for 1897. By George W. Crile, A.M., M.D., Ph.D., Professor of the Principles of Surgery and Applied Anatomy in the Cleveland College of Physicians and Surgeons; formerly Professor of Physiology in the Medical Department of the University of Wooster; Attending Surgeon to the St. Alexis and Cleveland General Hospitals. Philadelphia: J. B. Lippincott Company, 1899. pp. 160. Octavo. $2.50.

This profusely illustrated little volume of original research should be in the hands of everyone who does any surgical work, as it may help to save a life. The factors causing shock, the post-mortem appearance, and the prevention, including therapeutic measures, together with the treatment of the shock itself, are concisely and lucidly set forth. The paper was certainly worthy the consideration it received.

THE READY REFERENCE HANDBOOK OF DISEASES OF THE SKIN. By George Thomas Jackson, M.D., Professor of Dermatology, Woman's Medical College of the New York Infirmary and in the Medical Department of the University of Vermont, Chief of Clinic and Instructor in Dermatology, College of Physicians and Surgeons, New York. New (third) edition. In one 12mo. volume of 638 pages, and seventy-five illustrations and a colored plate. Cloth, $2.50, net. Lea Brothers and Co., Philadelphia and New York.

The rapid exhaustion of the second edition of this valuable handbook is certainly a sure indication of its value. The third edition is revised to accord with the advances in dermatological literature. The alphabetical arrangement of the text is a great convenience for ready reference, and there is a full index beside. An appendix contains valuable formulæ for baths and on other purposes. We commend the book to our readers.

ELEMENTARY PHYSIOLOGY. By Benjamin Moore, A.M. With 125 illustrations. New York: Longmans, Green & Co., 1899. Price, $1.25.

This little volume is comparatively free from technical terms, and is specially adapted to the junior student and the general reader.

ADMIRAL SAMPSON has written for the April *Century* an illustrated article fully describing the work of "The Atlantic Fleet in the Spanish War," and drawing its lessons. The more important features of this paper are a plan setting forth the character of the blockade of Santiago Harbor; maps showing the relative positions from day to day of Cervera, Schley, and Sampson; and a series of bird's-eye plans of the engagement of July 3, showing the positions of the vessels at different stages of the fight. In a foot-note the Admiral tells this good story:

"As we passed the Teresa and Oquendo, a Spanish sailor was seen struggling in the water on the seaward side of the New York. In response to his calls for help, one of the crew seized the chaplain's reading-desk, which was stowed on the main deck in the passage between the two cabins, and which had a cross showing on it. As he did so, he cried out grimly, 'Cling to the cross and you'll be saved!' The Spaniard followed instructions, and *was* saved.

THE January volume of "The International Clinic," published by Lippincott & Co., is specially rich in articles of lasting value. Every department of medical literature is included in the table of contents.

Dr. JOHN H. HUBER is publishing a series of papers in the *Medical News* on "Christian Science," which should interest all seekers after truth. The work has been done from a scientific standpoint, by a man competent to do it. The cases reported will convince any medical man as to the value of the so-called "treatment."

Dr. Huber concludes his series of articles in which he

delineates the clinical aspects of quite a number of cases to which he was referred, with the following deductions:

"Before concluding, the following observation will tend to illustrate the inherent dishonesty of this movement: One of these 'healers' complained to me of the disadvantage at which Christian Science is placed in these times. Should one of their patients die the case must become a coroner's case and be subject to his investigation.

"A Christian-Scientist's certificate of death would not be accepted. Therefore, should they get into any trouble of this sort, they have to seek (and it is declared they sometimes find) an obliging physician who will get them out of their trouble by signing a certificate for them.

"It is difficult to treat some aspects of this movement seriously; of others no criticism could, to my mind, be sufficiently condemnatory. Many of the dangerously sick are in the hands of these people. We are, therefore, I think, entitled to absolute frankness from them concerning their methods. This attribute, I, for my part, have often found deplorably lacking. There are personal observations in this paper which are intended to illustrate the character of the movement; therefore I consider them justifiable.

"Many Christian Scientists are undoubtedly good and worthy people; these demonstrate anew the well-established fact that mankind, generally speaking, displays an extraordinary readiness to be humbugged. Those in authority in Christian Science make it evident that they fully understand and know well how to reap the utmost advantage from this trait in human nature. If these people really have the good of human kind at heart they are certainly the most original truth-holders and truth-offerers that have ever appeared in the world's history.

"The chiefest and the one essential attribute of those who have loved and have tried to lift up mankind has been absolute self-abnegation. And the greatest among these He, in whose garb these people are hideously masquerading, was the humblest and the most unselfish of them all. But consider the woman who is at the head of this movement. Besides the facts already stated to illustrate her sordid motives there are these: She has for many years been conducting a 'metaphysical college,' in which her pupils have paid a regular fee of $300 for a two-weeks' course, in order that they might, in their turn, reap the pecuniary benefits to be got out of this movement. She has with unspeakable presumption imitated the recorded healings of the Master, but in a spirit woefully unlike His has exacted enormous fees for the exhibition of her alleged powers. She preaches the brutal doctrine that 'no one has any business being poor.' She is hedged in by 'counsel' and other legal paraphernalia, and through this 'counsel' must the outside world communicate with her. Such is the spirit dominating 'Christian Science.' What a contrast! On the one hand this movement; on the other the personality upon which it trades and of which it makes capital—that of 'the pale, staggering Jew with the crown of thorns upon His bleeding head.' "

NEWER THERAPEUTIC NOTES.

The Beneficial Effect of Amyl Nitrite in Epilepsy.—If the theory is correct that the convulsions in epilepsy are due to vaso-motor spasm at the base of the brain, it would seem that the nitrite of amyl is indicated in this condition, for physiological experiments seem to demonstrate that this salt acts on the vaso-motor centers. It has been tried in this condition, but its use does not seem to have spread to any great extent. In the *status epilepticus*, when the fits follow each other in rapid succession, the drug has been used with great success. According to Weir Mitchell, when there is a marked period between the aura and the convulsion, the latter can usually be prevented by the inhalation of a few drops of the drug, which the patient should always carry with him. In the advanced stages of convulsion it should be used with care, because the symptoms of the disease obscure its effects.

There occurred a case recently in which this drug had excellent effect under the following circumstances: A soldier in the recent campaign in Cuba received a wound in the forehead which carried away a portion of the frontal bone, as well as a part of the frontal lobe of the brain. The man was thought to be dead when picked up, but showing signs of life, a surgeon removed the clotted blood and spicula of bone and the man recovered. The case is interesting because now, six weeks ago, the man was seized with a convulsive attack, which has been followed by others of a similar nature. The aura is a sensation in the mouth, as if there was an increased flow of saliva; then a twitching of the cheek follows. Unconsciousness lasted from fifteen to thirty minutes, and was followed by headache for a time. The surgeons thought that surgical interference was unjustifiable at the present time. Another interesting point is that the injury is not in the motor area of the brain. The epilepsy is not Jacksonian in type at the present time. The man falls violently, as he has smashed an ankle, and injured his head by the falls already received.

The aura gave him time to take medicine before the attack, so he was ordered some five minim nitrite of amyl pearls to use when the aura came on. He used four of these, the threatened attacks coming about one-half hour apart. In each case the attack was prevented, and none have been threatened since. Besides abating an attack, this result is also distinctly curative, because each attack predisposes to another, and each one prevented is a help toward stopping the tendency. Nitrite of amyl may be positively curative in some cases, as we hope will be the result in this case. It is also well in such cases to rub into the cicatrix and the neighboring edge of the skull a fifty per cent. ointment of ichthyol. The hard cicatrix and the exudate is softened and lessens the liability to irritation from that source. Bromides were not given in this case. They are apt to affect digestion and impair general nutrition, and thus not act as well as the nitrite of amyl. The protoiodide of mercury will also be given, one-eighth of a grain three times a day, giving an extra one-eighth each day until one-half grain, or a maximum amount, be given. This will then be cut to one-half the amount and continued for six months.

Contra-Indication to the Use of Digitalis.—It is growing more evident every year that a knowledge of the relation of the heart muscle to the work required of it, in any individual case, is much more necessary than to know what valve is diseased. As a rule, however, digitalis is not generally so useful in aortic disease as in mitral, as the prolonged diastole of digitalis favors the return of the blood to the heart. Nevertheless, when the heart muscle fails, and the hypertrophy is not compensatory, this drug can be used with good effect in both aortic stenosis and insufficiency.

The following case is an excellent example of the contra-indication to the use of digitalis:

The patient, who was a boy of fourteen, gave a history of three attacks of inflammatory rheumatism; one when nine years of age, one when twelve, and the third in May and June of last year. There was pleural effusion during the first attack, and some pericardial effusion with the second. Recovery from all of these attacks was complete, so far as the joints were concerned. The present symptoms are shortness of breath and palpitation upon exertion, nose bleeding, headaches while in school, and susceptibility in reference to catching cold. As rheumatism is now rather regarded as an infectious disease, we have here evidence of its extension to the endocardium, serous as well as synovial membranes being susceptible to its influence. The pericardium may also be involved, more rarely the pleura, and still more rarely the peritoneum. In exceedingly rare cases the cerebral membranes are involved. In this case the pericardium is adherent, as shown by systolic dimpling over the chest and Broadbent's sign posteriorly. The heart is very much enlarged, the pulse is receding. There is a pre-systolic thrill, also a systolic thrill at the root of the neck on the right side. There are also systolic and diastolic thrills over the aorta.

There was, in this case, stenosis and insufficiency of both mitral and aortic valves. Compensation has been established, as is shown by the fact that the boy has been getting along perfectly well, unless he is called on to make any extra exertion.

In such a case as this no ordinary heart tonics are required; if digitalis is given, the rest afforded would increase the nutrition of the heart, and thus intensify the hypertrophy of that organ. The boy must be kept down to the level of his heart. His secretions must be regulated, simple diet prescribed, and no violent exercise permitted. Strychnia given occasionally in sixtieth of a grain doses three times daily, might be prescribed. During the winter

months cod liver oil is clearly of advantage, especially if combined with the hypophosphites. No cardiac tonics, and, above all, no digitalis, should be given.

Treatment of Articular Rheumatism with Acetanilid.—The patient is a woman who had an attack of rheumatism at ten years of age, and has had several attacks since. The knee, hip, elbow, and wrist joints are involved. The type is that in which the inflammation and swelling is not great, but the pain is intense. The woman has been given one-sixth of a grain of morphia as often as necessary to relieve the pain, and ichthyol ointment has been applied. She has not been put on the salicylates, because of the fear that these might disorder the stomach, and also that the effect of ichthyol and morphia, together with acetanilid, might be noticed. The latter has been given every four hours in tablets, so that twelve grains are given in twenty-four hours. This usually quiets the pain, and does not disorder the stomach, as does the salicylates. At present her ankles and knees are better, but the disease is more marked in the upper extremities.

There is a growing belief that people die every year from pericarditis with effusion in connection with this disease and pneumonia, etc., who might be saved if the fluid were withdrawn by aspiration. One trouble with this is the great difficulty in making a diagnosis between this condition and a dilated heart. It is the opinion of authorities that the fifth intercostal space is a proper place to make the puncture. In one case the operator got only some blood. A second trial an inch away gave the same result, and in this case the ventricles of a dilated heart had been tapped. The patient was made better each time, probably being relieved by easing the engorged ventricles. However that may be, paracentesis should be done oftener than it is in cases of rheumatism. J. H. A.

HOSPITAL REPORTS.

SURGICAL CLINIC, HELD AT THE SYMS BUILDING, ROOSEVELT HOSPITAL, NEW YORK CITY, MARCH 4TH, 1899.

By Charles McBurney, M.D.,

Visiting Surgeon, Roosevelt Hospital; Consulting Surgeon, Presbyterian and St. Luke's Hospitals, etc.

FRACTURE OF THE PATELLA.

I wish first to show you a case of fracture of the patella, which I operated upon before you three weeks ago. In this case there was much effusion and a wide separation of the fragments and it was very doubtful if a good result could be obtained by external appliances without operation. This patient has had an uninterupted convalescence, and all has healed nicely and union is as perfect as could be expected at this stage. He can walk well. The best evidence of the strength or the value of the result of the operation is the power of extension, of course. He can exert much force as you can now see. This force of extension will be increased by systematic working with passive and active motion. The more one operates upon these cases the more is he satisfied with the results obtained. While the result of treatment may be good the result will by no means be good enough for a working man; operations give good results. Yesterday I operated upon a case where the conditions were well marked and necessitated operating. The fracture occurred at the extreme upper part of the patella and the upper end was not more than one-half an inch in diameter; it was so tilted that the fractured surface turned towards the femur. Sometimes where the fractures are multiple or where there occurs tilting none of these can get good strong repair without operation. These operations have been very satisfactory indeed.

BULLET WOUND.

This next patient I present to you is a little fellow with an extensive bullet wound. The bullet grooved the whole upper surface of the liver, then passed through the diaphragm in immediate relationship to the heart, then through the lower portion of the lung and is now located somewhere in some portion of the back where we will look for it later. The boy is now absolutely well and this bullet will be located later by means of the X-ray. It may not do any harm. Last Saturday I showed this boy because he then was the subject of a beginning attack of appendicitis in a mild form. He is the only case on record in the wards where an attack of appendicitis developed while the patient was suffering from something else. It was a simple catarrhal type with moderate fever and the ordinary signs of the disease. The attack was subsiding and I would advise that the appendix be removed before he has another attack.

CONGENITAL HERNIA.

This next young boy I operated upon three weeks ago to-day, for a hernia of the kind that occurs where the testes are partially retained. This is a congenial type with the testes in the canal and giving rise to much discomfort. An operation was performed to relieve both conditions, taking away the testes and completing the operation by Bassini's method. I strongly recommend in cases where there exists a large ring, especially in elderly patients, where the ambition of the individual is not specially concerned with his testes, I here strongly recommend the removal of his testes when operating upon him for hernia; of course there are a great many cases where I would not think of doing it. This should be done where one feels the necessity of making as perfect a result as possible. The gentlemen present can appreciate what I mean without going into details.

ROUND-CELLED SARCOMA.

This next patient, a woman, carries her photograph with her, which shows well the picture of the tumor I removed. It was of considerable size, occupying the whole of the left cheek, and was of many months' duration. It was very soft; the use of the exploring needle proved that there was no fluid in it. The diagnosis made was that it was a round celled sarcoma, apparently originating in the cheek. In operating I took away a considerable area of the skin, so as to render the liability to recurrences less great; for the same reason I made no pretense to preserve any of the nerves which might have been kept in an innocent tumor. I did not try at all to preserve the facial nerve. The result is as you can here see, the left side not responding when the patient endeavors to make facial expressions; there is incomplete paralysis here. The skin over the tumor I sacrificed because the skin was firmly attached to the tumor. By taking away so much of the skin I could not close the wound. The masseter muscle you are now looking at. In the course of a week or ten days when the granulations are flush with the surface I will do skin grafting.

CARCINOMA OF BREAST.

This next patient is one that I operated upon for carcinoma of the breast. It was lying in the axillary line at the upper quadrant and was in a very uncomfortable situation. The breast seemed to be free from disease. There was some enlargement in the axilla. An extensive operation was done, the same as I always do now, called the Halstead method, he having devised the plan. An extensive incision was made, uncovering both the pectoralis major and pectoralis minor, and the axilla was dissected out. It is possible to dissect out everything in the axillary region except two things, the blood vessels and the important nerves. This peculiar long winding incision was made for two reasons; first it does away with the undesirable cicatrix through the floor of the axilla, which was left by the old method; second, one can turn the flap back and so entirely uncover the pectoral muscles; the lower flap can be so turned as to uncover the whole floor of the axilla. The rapidity with which motion is obtained after this operation adds much to the advantage of it; where the muscles are left the infiltration and thickening process interferes with the return of movement. This woman at the end of three weeks can put her hand behind her head, behind her back, etc. Curiously enough the muscular power is, after a while, fully as great as if the muscles were left, *i. e.*, they do not seem to miss that power given by the pectoral muscles. The object of doing such an extensive operation is to avoid the recurrence of the disease.

TUBERCULAR COXITIS.

The patient I shall operate upon to-day is a boy eleven years of age, who is suffering from hip joint disease of about eight years' duration. The initial disease of the left hip, with the inflammatory signs and joint disturbances, began eight years ago. He has been in hospitals from time to time ever since then. He has had abscesses which were treated with and without operation; these communicated with the joint disease, having originated in the head of the femur. Two months ago he was presented to me for further treatment. The boy was very delicate, emaciated, with an atrophied limb, with deep sinuses and ugly abscess cavities lined with tubercular granulations, the sinuses leading directly to the hip joint. I noticed the worthless condition of the limb. I felt that there was not only extensive disease in the hip joint itself in this individual impossible to cure by ordinary means of treatment but that the limb had gone through such changes that it would be perfectly useless now, and even would be if the acute disease were cured. However, the boy had extensive abscesses and the cavities were lined with granulations. I dislike to take off a whole limb where the disease in the upper part can be cured. I explored the cavity and found necrosis in the head of the femur; that I took out and dressed in the ordinary way. The boy then did very well and gained in flesh. But he still has the sinuses, and he is not much benefited so far as getting about is concerned. So I made up my mind that if the individual was to be benefited he must be benefited by a radical operation. Now I should be loath to have you understand me as saying that I recommend amputation for tubercular disease of the hip joint. There are a very large number of hip joint cases that can be extremely satisfactorily treated if proper attention could be given to orthoepedic appliances. Every case that can be treated in that way should be so treated. But there are cases that require amputation for the reason that the limb, while in place, entirely interferes with the proper treatment of the diseased condition; that is the sum and substance of it. If radical measures are to be instituted one of two things may be done: first, remove a large section so as to lay the part bare; second, take away the entire limb. If we operate and leave a large gaping wound it subjects the patient to a severe operation and the convalescence is a trying one, taking months to obtain complete healing of such a wound. It is difficult to obtain healing under the best possible conditions. When healing has occurred the limb is found to be shortened, being held by a mass of newly formed fibrous tissue and is perfectly useless; that is the result of the first method mentioned.

When treating this condition by the second method, that by amputation, it at once exposes the disease and we can treat the disease radically. We get rid of a limb that is perfectly useless. It at once puts the patient in a condition for the best possible opportunity for the restoration of health, so that I determined in this case that the most rational and complete operation should be done. There are a great many cases now going about to the different hospitals where the operation should be done, but is not done. In my experience there were two such cases, both occurring in adults. One of these cases was a professor in a neighboring university. He was an emaciated, unhappy, feeble individual, going about from one doctor to another to get rid of his tubercular disease. When he came to me I advised him to get rid of it by amputation. He went through the operation successfully and in a few months he got back to his original weight and every function in his body was perfect and he is now practicing his profession. He goes on crutches and does not have to carry a heavy burden with him, as he would have done without operation.

Another case was also operated upon here about one and a half years ago, the disease occurring in an adult. There were numerous sinuses which had been subjected to different treatments at different places. He still remained under the influence of the disease and he had made up his mind that it was useless to try any further treatment. Amputation was done in that case. A few days ago I received a letter from him. He is now in California, practicing his profession, selling notions and stumping the whole State of California. He has saved much money and is entirely well.

Regarding the amputation, the disturbance is not so great between thigh amputation and hip-joint amputation so far as shock is concerned. There is a difference in regard to the causes of shock; but the real cause of shock is the amount of hemorrhage. In controlling hemorrhage, one may compress the femoral artery or tie it; but the distal branches may bleed, so if we wish to make the amputation a bloodless one we must get back to the source of the blood. It is not worth while to go into a description of the different methods of stopping hemorrhage. The one I have used in certain cases and the one that I will use to-day I will describe in a few minutes. Another method to make the operation bloodless is by means of strictures about the thigh, but the shape of the thigh is such that this method could not be used in this case, because it would slide off. Dr. Wyeth invented pins which maintain the stricture in position. One pin is applied on the inside and the other on the outside of the extreme upper portion of the thigh and the stricture is wound about so shutting off the blood by pressure. Amputation can be done in that way without loss of blood. On account of the disease being so extensive we cannot use this method in this case.

I was led to adopt another method which has proved satisfactory to me, and that was to get back to the source of the vessel by making a small opening in the abdominal wall, and have the common iliac compressed by an assistant, he using his fingers for that purpose. This has proven to me eminently satisfactory.

INTERESTING CASES FROM THE CLINICS.

I. A Case Illustrating the Latency of Chronic Bright's Disease. II. A Rare Case of Diffuse Abscess of the Lungs. III. An Enormous Heart Resulting from a Rare Cause. IV. Catarrhal Jaundice and Its Treatment. V. Hypertorophic Cirrhosis. VI. A Case of Aortic etc. VII. A Complicated Case, etc.

I. A CASE ILLUSTRATING THE LATENCY OF CHRONIC BRIGHT'S DISEASE.

The following instructive case came to post mortem within a few days. A well-known man was brought into the hospital a few days before in a state of great prostration. He had been sitting in his office, when he suddenly fell over unconscious. At first, it was thought that he was dead, but he soon showed signs of reviving consciousness, during which he told his past history. He then became unconscious, and developed a condition of extraordinary restlessness. The clew to his condition was found by examining his urine, which contained albumin, granular and hyaline casts, and had a specific gravity of 1014. This pointed to uremic coma, and he was given vapor baths at a temperature of 200 degrees, which, with the administration of one-eighth of a grain of pilocarpin every third hour, induced profuse perspiration, and quieted the patient. He was freely purged with Croton oil, and was given chloral, but the treatment was of no avail.

At post mortem, the kidneys shows the typical changes of Bright's disease, while the heart has a hypertrophied left ventricle, and on the aorta are seen atheromatous patches.

Now, this man years ago had had convulsions extending over some time, but had recovered from them. He had been perfectly well, so far as he knew, after that until the day before he was brought to the hospital, when he was seized with a headache, followed by convulsions and prostration.

This case shows a possible cause for convulsions that should be thought of when they occur without evident cause, and the urine should be examined in such cases. Undoubtedly this would have shown the condition of the man at any time since his first attack, but he had recovered, and was acting as the superintendent of a large concern, although he had this disease, which was unknown to himself or friends. During all this time they supposed his liability to convulsions was over. The case also well illustrates the latency of chronic Bright's disease; how it may be quiet for years, and then suddenly explode its force with such violence that nothing can be done to check it.

I will also speak of another point, although I had no opportunity to confirm it in this case, and that is the fact that very likely this man had something wrong with his

eyes. An ophthalmological examination, like a test of urine, would in all probability have shown his condition.

In regard to the relation of the hypertrophy of the left ventricle to the kidney lesions, I mention the mechanical theory, which ascribes it to the effect of increased blood pressure. Another theory, and one which I believe is correct, is that the condition of the heart is only a part of the general morbid process, and changes take place in it which are comparable to those in the kidney.

II. A RARE CASE OF DIFFUSE ABSCESS OF THE LUNGS.

I show some specimens of unusual interest, which were taken from a man who died a short time since. He was in the hospital but two days, and was so ill when admitted that a thorough examination could not be made. He had been taken with chills, some fever, vomiting and other severe symptoms, and was prostrated when admitted to the hospital. Such examination as was possible under the circumstances showed a consolidated pneumonia in the left lung, and also some degree of the same process in the right lung. An examination of the chest posteriorly could not be made. The man was given stimulants, and efforts made to tide him over the condition, but he rapidly sank.

The autopsy shows evidences of pleurisy over some parts of the lungs, but the most interesting point is that there are small abscesses scattered through both lungs. The man had been ill only seven days, which makes the case still more out of the ordinary. Diffuse abscess is most unusual in the progress of pneumonia, and renders the recovery of the patient impossible. One, or even two, large abscesses sometimes occur subsequent to an attack of pneumonia, and then recovery is possible. It is also singular in this case that the temperature was not higher, 103 degrees being the highest reached.

There was some septic infection, although I cannot say just what it was. The autopsy revealed some evidence of peritonitis. The only other change noted was that one kidney was contracted and granular, while the other remained normal.

III. AN ENORMOUS HEART RESULTING FROM ADHESIVE PERICARDITIS.

A case which I wish to bring to your attention is one of disease of the heart, and one which illustrates a physical sign of great rarity. The man is a Polish miner, and very little can be learned of his past history. About all we can learn from his friends is that he has been suffering from heart disease for a year or more. The main symptoms of which the patient complains are attacks of dyspnoea and pain in the region of the heart. An examination of the urine shows some albumin and granular casts.

On inspection, we see a great throbbing of the carotids and a moderate distension of the veins, especially on the right side. The most noticeable, however, is the greatly extended cardiac impulse, which is seen as low as the seventh interspace, and nearly an inch outside the nipple line. Another thing to be noticed is that the chest wall sinks in with the beat of the heart. There is also some epigastric impulse. When we turn the patient on his side the same phenomenon of sinking in, with systole, is observed, giving a typical case of what is known as Broadbent's sign. This means that there is not only extensive adhesions of the pericardium, as shown by the recession anteriorly, but that the pericardium is also adherent to the diaphragm and anterior chest wall.

Percussion shows the heart to be more than twice its natural size, it being the largest I have ever seen under these conditions. There is also a short mitral murmur and an indistinct second sound. Pericardial friction sounds are heard over the areas, not adherent, and a short murmur accompanies the aortic second sound.

We have here then a greatly hypertrophied and dilated heart, which is in danger of chronic pericarditis. The valvular trouble is secondary here, coming from the inability of the valves to close in their stretched condition. The pericarditis most likely comes from Bright's disease, of which there is evidence in this man. This is, next to rheumatism, the most frequent cause, although, as this man is a miner, he may have received an injury which gave rise to the lesion.

Now, as to the treatment. First, he has been at rest in bed; second, we tried to dilate his vessels, in order to take as much work as possible from the heart. Nitroglycerine has been given, with the most gratifying result. The dose has been 1-100 of a grain every four hours. In these cases the moderate use of such remedies as strophanthus, which sustain the heart without increasing blood pressure, may be kept up with advantage. I place no value on the use of ice, or local remedies, except a small blister, which might be tried. Absorbents, such as the iodide of potassium, would be of no use at this stage of the process. Earlier, when the exudate was being poured out, they would have been of avail.

IV. CATARRHAL JAUNDICE AND ITS TREATMENT.

The next case is that of a young man, who has just been admitted, and who, I am told, has symptoms very like the last patient. We will examine him together, and see what the case presents. His history is that five days ago he noticed a fullness of the abdomen, accompanied by pain in the right iliac fossa, and also in the hepatic region. There was some vomiting, and at first diarrhea, which was followed by constipation. A few days ago there was a severe pain in the region of the gall bladder. His temperature is 99.4 degrees, and the urine is dark, and contains albumin and bile. As you see, he is somewhat jaundiced.

The case, then, is somewhat similar to the first one, but this man is not nearly so ill. I find the liver somewhat enlarged, with a distinct swelling over the gall bladder, and some tenderness. The tongue is coated a yellowish white, and there is no doubt as to the condition present here. This young man is suffering from catarrh of the biliary ducts, with a consequent distention of the gall bladder. The catarrh is more marked than in the preceding case, and there is more jaundice. This case also differs from the other in affecting the ducts more than the bladder, the first being the reverse of this.

There are other conditions which might cause these symptoms, as well as the catarrhal state of the ducts, just mentioned. It might be the result of inspissated bile blocking up the ducts in some part of their course. Again, there might be a gall-stone hindering the flow of the bile. But if either of these conditions obtained, there ought to be a history of cramps and pain, and repeated attacks of these symptoms. There is no such history here. There is also a history of alcoholism in this man, and this may produce such a result. But considering the time of year and the way the attack has come on, it is more likely to be catarrhal. The man is sure of recovery, and now as to treatment:

He should be put on absolute diet, and skim milk is the best thing that can be given such patients, if it can be so arranged, and they can do well on it. If this cannot be maintained, then a course of green vegetables, very little meat, with no starches, sugar, or fat, may be allowed. The point is to get as sparse a diet as is possible. Under these circumstances not much bile will be secreted, which is very desirable. Then remedies should be given which act by unloading the portal circulation. Not much calomel should be given, because of its effect on the action of the liver. Phosphate of sodium is as good a thing as can be given in these cases. It should be given in the amount of one-half ounce to one ounce daily. Acetate of potassium is also good, in doses of fifteen grains four times a day. This is the treatment this man will receive, and should show prompt results.

V. HYPERTROPHIC CIRRHOSIS.

The next case I wish to bring before you is also a liver case, but in marked contrast to the acute catarrhal case just dismissed. The patient is a cab driver, thirty-two years of age, who is a victim of alcoholism. His father died of kidney disease, one brother of heart trouble, while another brother and a sister have cardiac symptoms also. The patient was treated here three months last year for inflammatory rheumatism, but there was no cardiac trouble at that time. His family history, then, as well as that of his own, is bad.

When brought in he was jaundiced; his abdomen was greatly distended; he had great difficulty in breathing, and was in a state bordering on collapse. An examination showed the urine to contain albumin, casts, and bile. The distension of the abdomen was so great, and interfered with breathing to such extent, that it was tapped, and 130 ounces of fluid withdrawn. The patient now has a slight cough, and there is a short systolic mitral murmur. On auscultation, a harsh respiratory sound is heard over the lower part of the left lung posteriorly. The liver is enlarged, extending two fingers' breadth below the margin of the ribs, and is irregular and resistant to the touch.

There is no distension of the gall bladder, no pain and no tenderness.

We have here, then, a man showing gross changes in the kidneys, and liver from the excessive use of alcohol. In the kidney we have Bright's disease, most likely of the contracting kind. In the liver is found the condition of hypertrophic cirrhosis. There are two kinds of cirrhosis, which are practically the same process, but which yield somewhat different conditions and results. In the one there is an increase of tissue along the capsule of Glisson. This becomes fibroid, as does other parts, and, by contracting, gives the common form, or small hob-nailed liver. But this one, with which we are dealing, is enlarged, and is the hypertrophic variety. There is the same increase of fibrous tissue as in the other, except the organ enlarges instead of contracting. Both are essentially the same process, but the latter is not so dangerous to life; that is, the symptoms continue longer before the patient succumbs, though both, in the long run, are incurable, and both give rise to dropsy. Enlarged veins in the abdomen are more conspicuous in the contracting variety, but they can easily be noticed in this man. The hypertrophic variety is more amenable to treatment.

The treatment in this case should be the same regulation of diet as in the other cases mentioned, *i. e.*, no starches or sugar—in short, spare the liver as much as possible. Give purgatives to act on the upper circle of the digestive tract. In addition, it will be found that in many of these cases depletion will be favored by the use of bichloride of mercury, and, perhaps, varied after a time by the iodide of mercury. This man will be given 1-30 grain of the bichloride three times a day. The breathing is still very labored, but this will clear up as the effusion ceases.

VI. A CASE OF AORTIC INSUFFICIENCY, INTERESTING ON ACCOUNT OF TREATMENT.

The following patient's history presents these interesting points: The man has always been well until recent years. The only breaks in this statement are the records of rheumatism, in 1871, and he states that he has had both a chancre and a bubo. But beyond this record, we lose all trace of any venereal or rheumatic history. There are no other points of noteworthy importance in his past. Although a liquor dealer, he has never been a hard drinker. His present condition is as follows: His legs, feet and scrotum are oedematous; he is in the condition of orthopnea; his respirations are forty-eight to the minute; his pulse is ninety-six, regular in beat, but feeble and collapsing. The cardiac apex beat is diffused in the fifth and sixth interspace, an inch outside of the nipple line. The impulse is not only not strong, but it impresses one as being fluttering and tremulous. Dullness begins at the upper border of the fourth rib, beyond the nipple, to the left, and the sternum to the right. On auscultation we detect at the aortic cartilage a double second murmur. The heart sounds at the apex are very feeble. Watching the patient closely reveals the fact that he has the Cheyne-Stokes breathing—the gradually increasing and decreasing rhythmical respiration.

This is the man's third attack of heart trouble. The first attack was noticed in 1893; the second followed in 1896 and the third in 1899. The increase in severity of these attacks is interesting; in the first attack he had shortness of breath on exertion; in the second attack in 1896, he had it while at rest in bed. Under careful treatment, on which we will dilate, he was enabled each time to return to his labors with more or less satisfaction to himself.

We will give him the treatment on which he improved sufficiently twice before to avoid the need of a physician for three years at a time, and while not a strong active man, to oversee his business, for he was not in active physical labor at the time of his first attack. In this attack we will give him eight to ten ounces of whiskey daily, with the tincture of digitalis fifteen drops every two hours and a third of a grain of calomel for a diuretic every four hours. In addition he will be given a saline purge, one-half ounce of Epsom salts every other morning, with as little liquid as is possible to get it down.

Of course strict rest in bed is an essential feature in this treatment; so we will keep him in bed and give him ten saline purges and the whiskey, but will withhold the calomel and digitalis to see if they are essential features in changing his condition.

[NOTE.—A week later. The patient has improved; he rests well; he can lie in bed with his head lower; his pulse regular and moderate, being 72. The dropsy in his legs has disappeared. He was not given the digitalis and the calomel for the first three days after seeing him but the results were not good or even satisfactory; in fact, his condition grew worse. It was soon apparent that the rest in bed, the whiskey and the salts were not sufficient to help the struggling heart to regain its equilibrium, which it was essential should be approximated. His symptoms grew steadily worse; his dyspnoea became urgent; his oedema increased and his heart impulse was more trembling and uncertain. In consequence he has had for four days the calomel and digitalis.]

The actual diuretic value of calomel is uncertain; we know about the increase in the quantity of urine when digitalis alone is given, so we can study the results in this case. On the 6th of the month, two days before beginning the calomel and digitalis the amount of urine passed was eighteen ounces in twenty-four hours. The same amount was passed on the 7th, and only twenty on the the 8th. Then these two drugs were started; on the 11th, twenty-eighth ounces were passed, thirty-two on the 15th, and fifty-four on the 18th. I do not think that the calomel had any especial diuretic action for in a companion case it was omitted and the same results were obtained.

Hoffman's anodyne and the aromatic spirits of ammonia were used at times in this case with good results.]

[Three weeks later the man was able to get back to work; the equilibrium between the heart and its task was fairly well established.]

VII. A COMPLICATED CASE HAVING AN INTERESTING HISTORY.

The patient under discussion comes to us with the following complaint:

At certain intervals he experiences a sensation of tension in the lower part of the left lung which after a time seems to give way, this being followed by expectoration of foul-smelling pus lasting for a day or more. At some of these attacks nearly a quart of this material is coughed up. The intervals between successive attacks vary from one to three months. We will see what light the patient's previous history throws on this symptom and then notice his present condition.

The man is a traveling salesman, thirty-eight years of age, and had an attack of enteric fever when he was seventeen. At that time there was pain in both lungs and a hacking cough that lasted for some time. After that he had good health for ten years. When thirty years old he had an attack of croupous pneumonia, with pleurisy on the right side, and this was followed by similar attacks during each of the three succeeding winters, both lungs being implicated at one time or another. Five years ago he had a cough for a week and hemoptysis losing about two teacupfuls of blood. After this he was practically well until two years ago when hemoptysis came on again and he was in bed all winter. There was cough and expectoration followed by the condition first described and which still continues.

The sputum between the attacks is a watery fluid containing tough masses of a grayish material and at times is blood stained. A microscopic examination shows numerous micrococci, tubercle bacilli—though not in great numbers—and streptococci. The man's temperature is usually between 98 degrees and 100 degrees, and he has night-sweats, but not at all abundant ones. There is evidence of chronic bronchitis of both lungs, emphysema in the upper parts anteriorly, and of course tuberculous infection. The peculiarity of the case is the occasional expectoration of purulent fluid with the accompanying sensation in the lower part of the chest. There are four conditions which might give rise to this symptom, and a thorough investigation must be made before a differential diagnosis is arrived at. The intervals of time, one to three months, between the attacks seems a long one for any of these conditions. They are marked by cough and expectoration of pus at intervals, but these intervals should be nearer together. However, the patient is very positive in his statements in regard to this as well as the fact that the time of spitting up pus at each attack is about one day. With these facts we must try and arrive at a conclusion in regard to the cause of them.

The first condition which might be the cause in any case

is that of pulmonary abscess. But, if this were the case, we should find different constitutional symptoms than this man presents. He has had the attacks for a long time, and if the pus were formed in a regular abscess cavity we should look for more fever and a much more pronounced hectic condition in general. To be sure he has some degree of fever but not such as to suggest recurring abscess of such size. There are also night sweats, but these again are not abundant and marked.

The second condition which has to be thought of and which would seem somewhat reasonable in this case is that of a vomica in a consolidated lung. If this were the case, however, we should find a large area of dullness in the neighborhood of the cavity. This would come from the fact that there must be extensive involvement of the lung tissue, in order to have so much pus formed in this way. This dullness is not found, whatever amount existing being bilateral.

A third condition might be an empyema with a fistula connecting with a bronchus or its divisions. This should give, to a certain extent, pneumo-thorax after an attack and emptying had occurred. This has not been noticed nor has there been succussion sounds detected.

Bronchiectasis is a fourth possibility to deal with here. This may result from tubercular action on fibrous tissue or from interstitial pneumonia, or chronic bronchitis. If from the latter cause the process would work from the bronchi inward. If from pneumonia with adherent pleura we would have the advance from the other way, and would expect to find contractions in the chest wall because of the adhesions. And we see this sign well marked. Posteriorly when the patient takes a deep breath there is seen a patchy condition of intercostal retraction, showing that the lung does not freely expand in those places. There is increased vocal fremitus at the bases of both lungs, except at one point on the left side, and at this point there is exquisite whispering pectoriloquy. The fact of the conditions being bilateral, except this one, is of great importance as bearing on the diagnosis of a distinct cavity.

It is impossible to make a positive diagnosis at the present time, perhaps, but I shall make a provisional diagnosis of bronchiectasis following repeated attacks of pneumonia.

As to the treatment, experience has shown that in purulent bronchitis and allied affections the administration of sandal-wood oil has been followed by remarkable improvement, not only as regards the cough and expectoration, but the general health as well. This will be given in five minim doses, three or four times a day for a few weeks. Then after some time it may be renewed again.

I shall consult a surgeon in regard to opening the cavity, with the hope of obliterating it. Even if ribs had to be removed a sunken chest wall would be preferable to these attacks. There is an objection to surgical interference if the diagnosis made is correct. That is that even if one cavity be obliterated there are still others which may not be cured. This should be explained to the patient before any operation was instituted, and also the fact the condition is irremediable in the end.

A. G. E.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.

ACADEMY OF SCIENCES.

Clinical Exploration of Renal Functions.—M. Lannegue experimented with methylene blue to examine renal permeability. For this purpose glucose, by hypodermic injections, was used, but abandoned because the glycolitic aptitude of the tissues is very variable, and it was difficult to distinguish that which belonged to renal permeability from that of the tissues in the elimination of the injected glucose. MM. Delamarre and Lannelongue have experimented with phlodzizine. This sugar is eliminated by the kidneys, and has no action in the organism. Doses employed were 5 millgr. It was remarked that the sugar passed in small quantities in persons whose renal activity was feeble. On the contrary, where the renal functions were normal it was formed entire.

Changes in Volume of Organs from Turkish Baths.—MM. Bianchi and Regnault examined by means of the phonendoscope the condition of the principal organs during the sweating period of the bath and after the action of the cold douche. During sweating the heart, liver and lungs were dilated, and the stomach also, if empty. As soon as the temperature was depressed by the douche, or the cold water of the pool, all the organs were diminished. The bath acted as a sort of gymnastic of the organs, a kind of physiological massage.

Formation of Sugar in the Albumen in the Egg.—M. F. Blumenthal.—Many researches have been made to discover sugar in the molecule of albumen, a question of great importance in medicine, as man when gravely affected with diabetes, forms sugar with his tissues probably with his albumin. The author, confirming the investigations of Pavy and Krav Kov, has obtained from 8 to 12 grammes of sugar from 100 grammes of the albumen of the white of the egg.

Presence of Eberth's Bacillus in the Blood.—MM. Grandmaison and Cartier detected the above bacillus in a state of pure culture in the blood of a patient in the Maternity of Beaujon. There had been an abortion at five months. There was fever, and curettage was employed because of the fear of the beginning of puerperal infection. By heating the blood in a peptonized bouillon to 37°, and coloration by a hydro-alcoholic solution of fuchsine the microscope revealed the characteristic becilli of Eberth. Patient afterwards had typhoid fever, and undoubted signs of pneumonia.

SURGICAL SOCIETY.

Treatment of Appendicitis.—M. Walter gives the results of operations, and in hasty interventions they are the same as those given by medication. In a number of cases the non-resected appendix was absorbed, disappeared and cure was effected. There was recurrence in five cases in which the appendix was not removed, and which ought to have been resected promptly. It is said that the relapses are not serious, and that the abscess opens above the cicatrix. This is nearly always true, but a grave crisis may supervene. M. Kirmisson: I limit myself to acute appendicitis, and the clinic gives no absolute rule. When the violence of the attack is abated, and no suppuration occurs, all agree in non-intervention. Where there is pus in the iliac fossa in case of abscess there is no reason for non-intervention, and if peritonitis continues and no abscess, intervention is equally urgent. M. Jalaginer: The surgical axiom, "Intervene always," is very easy, but I don't believe it is acceptable to all. Medical treatment, diet, opium, ice, rest, no purgation, answer in the majority of cases, to which add two injections of serum daily. Be careful to diagnosticate between general and local peritonitis; when in doubt, operate. Pursue medical treatment to last degree, and operate when new and acute symptoms appear. The operation of choice, to attack the appendix, is the anterior, and not the posterior method. In warm appendicitis, make incision above arch, in cold, along border of rectus muscle.

BIOLOGICAL SOCIETY.

Leucocytes in Chlorosis.—MM. Gilbert and Emil Weil. The hematological lesions of chlorosis have been the subject of numerous researches. The alterations of the red globules were first studied. Later the beautiful works of Dr. Hayem illustrated the great pathological importance of the hematoblasts in this disease. Recently investigation of the serum of chlorotics was renewed by MM. Hayen and Marigliano, but while the morbid modifications of the red globules, the hematoblasts, and the serum in chlorosis were proved, classic authors in France and Germany—Hayem, Tuzet, Noorden—admit that the white globules remain normal. In five cases of true chlorosis and one of anemic tubercular chlorosis we have always found leucocytic alterations in the different elements. Without entering into pathogenic considerations, it may be admitted that in chlorosis all the elements of the blood and serum present alterations.

Streptococcic Infections; Sero-purulent Pleurisy in the Infant.—The existence of the above was diagnosed in a child of five days. The liquid of the effusion and blood bacteriologically examined. The first contained numerous chains of streptococci, not observed in the blood. When the two liquids were mixed in a peptonized bouillon and heated to 37 degrees, in twenty-four hours pure cultures of streptococci were produced. The autopsy revealed in-

teresting lesions. Alterations of the liver and a bronchopneumonia of the lower lobe of the left lung seemed to have been the efficient cause of the pleurisy. This infection was certainly anterior to expulsion. Immediately after birth the child was separated from the mother and had no contact with her up to time of death. It is then logical to admit that the infection was anterior to delivery; the placenta was not examined.

Cancer and Tuberculosis of the Stomach.—M. Claude observed the following interesting case: A development of epithelial cancer, with polyform cells, upon an adenoma in the condition of evolution. The cancerous tumor was infected by Koch's bacillus, which pullulated in its interior, and partly destroyed the neoplasm. This fact is peculiarly interesting, as indicating relations between the two diseases, and the role of tuberculosis in the histogenesis of cancer. Besides the anatomical fact presented, this tuberculo-cancerous symbiosis or association is as curious as it is rare. It shows that the tubercular bacillus, like the pyogenic microbes, finds in cancerous tissue a favorable soil, that cancerous sacs have no power to prevent the pullulation of germs, and the cells of epithelioma, which seem to be possessed of great vitality, are impotent against infectious agents. On the contrary, if the rarity of cases of tuberculosis of the stomach is recalled, it appears that cancer must be a favorable cause of the localization of Koch's bacillus upon the gastric mucous membrane, for in such a case the diminution of the chlorgasic acid of the gastric juice, and the functional alteration of the epithelial elements, would deprive the organ of its most active means of defense. We call attention to this tuberculo-cancerous hybridity, which has thus far not been perceived; its histological study alone permits it to be so characterized.

Treatment of Pulmonary Tuberculosis by Partial Immobilization of the Thorax.—M. Block presented to the Society a new treatment, consisting of the application of a plaster demi-cuirass upon the most diseased side of the thorax. Has had good effects in suppressing vomiting, dispersing painful points, calming cough, and in many instances in subduing fever; observations now number sixty. It has become undeniable that the majority of tuberculous cases have greatly benefited by unmobilization, provided contra-indications are respected. They are general tubercular infiltration, cachexia of the subjects, concomitant cardiopathy, emphysema, and a marked neuropathic condition. Except in cases in which it was not possible to maintain the immobility of the upper ribs, the treatment has given the best results. Pneumographic study has revealed two facts, the substitution of abdominal respiration, and the solidarity of the two sides of the thorax, which respire scarcely at all when compressed on one side only, so that the demi-cuirass is sufficient. Compress the upper part of the thorax by a thick layer of wadding, held in place by bandage; this last is just as satisfactory as the use of the plaster apparatus, is much easier and more quickly done, and more suitable to women. Avoid making the bandage too tight, or the distress would render the apparatus insupportable. The use of Esmarch's bandage has proved that. All of the good effects of the demi-cuirass can be as well obtained from the bandage, properly applied.

Treatment and Cure of Hernia by the Use of the Bicycle.—M. Lucas Championniere reported a work of M. Loir, director of the Pasteur Institute of Tunis, who presented to the Academy a case in which four months' exercise with the bicycle had caused to disappear a very troublesome inguinal hernia of four years' standing. This interesting fact is not new, nor isolated absolutely. M. Jennings has reported others of the same kind. For a long time M. Championniere has thought the rest imposed upon subjects of hernia is much worse for them than muscular activity. To him, bicycle exercise seems especially favorable for cases of hernia. The hernia has no tendency to descend, but rather to return and disappear. The bicycle is favorable to the general health and to loss of flesh, which is especially desirable. Not only does the bicycle constitute the true exercise for those afflicted with hernia, but in certain complications it may be the true method of treatment. A case was cited in which the tricycle had made endurable two irreducible herniæ, which had caused local and general accidents. Contrary to the usual opinion, M. Championniere declares that bicycling does not cause hernia, but is appropriate to its relief by improving the general health, allowing muscular exercise in the open air without the complicated muscular efforts of the vertical position.

Treatment of Acute Rheumatism by Methylene Blue.—M. Lemoine has used this remedy, not to diminish pain, but to control the fever, and the causal element itself, by reason of its electric action upon micro-organisms. In all the cases, except one, an asthenic articular rheumatism, it showed itself at least equal to the salicylate of soda. It should be used chemically pure, freed from the salts of zinc which it often contains; the impure blue sometimes causes cystitis. J. A. C.

CORRESPONDENCE.

To the Editors of THE MEDICAL TIMES:

In the March number, 1899, Dr. Morris has made a request in reference to my ten cases reported of appendicitis in the April number, 1898. I will endeavor to comply with his request in the June number of the TIMES. In view of the reports already in, I am quite sure that not only will Dr. Morris be very much interested, but also the profession and public.

The *Medical Record* for May 21, 1898, in an article, "Correspondence Between a Layman and a Surgeon on the Subject of Appendicitis," by Dr. Morris, I am disposed to question the correctness of his answers, as the consensus of opinion by the profession to the ten questions, as given by the layman. I believe it would be interesting reading to put those questions to other expert surgeons, in order to ascertain if there is not marked discrepancy of opinion on the statistics, the medical treatment, and on other points. Another report would make interesting reading: A report by the bureaux of vital statistics as to the deaths from appendicitis in a number of large cities. Then a report by the surgeons in those cities as to the number of operations performed. For instance, New York, Philadelphia, Chicago, Washington, Albany, Brooklyn, Milwaukee, St. Louis, Cincinnati, and Buffalo.

I wish to know if the doctor's statement that "it has been determined from statistics of many hundreds of operations, by American surgeons, that the surgical death rate in appendicitis is less than one per cent. in the class of cases in which infection is limited to the confines of the appendix proper." This includes primary infection cases before infection has spread beyond the appendix, and it includes the so-called "interval cases," or cases in which one or more acute attacks of bacterial invasion of the appendix have subsided, leaving a more or less damaged appendix, which is not being actively attacked by bacteria. It has been determined from statistics of several American surgeons that proper surgical operations in case of widespread infection outside of the confines of the appendix proper can lower the death rate in this class of case to about five per cent. in unselected consecutive series of cases, operation being performed upon all patients who are still living when the surgeon arrives. It has been determined that the death rate in appendicitis treated by any sort of mdical treatment, is not likely to be less than twenty-five per cent. eventually, although it is believed that the death rate in first attacks is not much above ten per cent.

In the discussion of last year I quoted the highest authority by medical men, who considered that about one out of twenty cases required an operation. Of the ten cases who wrote to Dr. Morris upon request, comparing the pain of the medical and the surgical procedure, I shall have something to say later on the side of those who prefer normal anatomy, and who are taught on the lines of physiology how to preserve it. M. O. TERRY.

To the Editors of THE MEDICAL TIMES:

As you have so often pointed out, the question actually pending between the "old" and "new" schools of medicine, is simply that of dropping or retaining the sectarian title and disbanding or keeping up sectarian organizations. Their leading representatives have been protesting over and over again, these many years past, that there is no longer any desire on the part of the "regulars" to interfere with the most perfect liberty of individual opinion and practice. Homeopathists (if educated and reputable) may now unite themselves with the great body of the profes-

sion, and yet go on dispensing "fluxion-potencies" or mother-tinctures, as the case may be, and in accordance with any doctrine they may choose to advocate, without being disturbed by any man or body of men whatsoever. As Flint, in 1885, declared, "the true ground for declining fellowship with any class of practitioners is not a belief in the teachings of Hahnemann or in any other dogma; it is the adoption of sectarian names as trademarks, and the formation of a sectarian school of practice, announced to the public as such." During at least a decade, then, the door has been held wide open by the American Medical Association and its affiliated societies, to those who held different views from the majority as to the action and dosage of drugs. Yet, until recently, very little notice, except in the way of sarcasm, has been taken of the invitation. For the most part it has been studiously ignored, as when a prominent homeopathic surgeon once publicly professed a readiness to discard his distinctive titles, on precisely the terms just mentioned—which, of course, he had never heard of, and as to which, after being informed of them, he had nothing further to say. But, nevertheless, an impression has been made, and the tide, at last, is veritably turning. In the January number of that ably conducted and strictly homeopathic journal, the *Chicago Medical Visitor*, we find the following editorial remarks anent some "pessimistic philosophizing" by a brother in the faith. The latter, contemplating the future of the homeopathic profession, "sees much that is discouraging." He is convinced that "to-day there is a greater danger of a disintegration of the homeopathic school as a separate and distinct school in medicine than there has been before." This "dark outlook" he attributes to "the fact that our friends of the dominant school have at last been shrewd enough to let down the bars and admit homeopathic students and graduates to their institutions on an equal footing with pupils of their own. As a result of this, it is stated that during the last year 300 homeopathic physicians took post-graduate courses in allopathic colleges. And what is worse, certain homeopathic students have since abandoned their chosen schools and started in to complete their course in the afore-mentioned objectionable institutions." All of which is looked upon as "a reprehensible and lamentable piece of business." "There is no doubt whatever," the *Medical Visitor* frankly admits, "that this new move on the part of our wily enemy bodes no good to the perpetuity of our institutions. * * * What are we going to do about it?" Several "pertinent thoughts" here suggest themselves to the writer. One is, "that in some respects the allopathic colleges are superior to our own. * * * They spare neither time nor money in an effort to cover the whole field of medical research in a thorough, practical, scientific manner. * * * True, the law of similars is not taught in these institutions, but the administration of drugs is only one of many sides to the whole practice of medicine." * * * "The remedy for this unfortunate condition of affairs" is stated to be obvious. "We must improve our homeopathic institutions. The requirements of yesterday are wholly insufficient for to-day. * * * As a rule, the leaders of the allopathic medical profession are able men, conscientious, energetic, progressive, alive to the needs of the hour. * * * Our students as well as ourselves, need and are entitled to the benefits of their united labors." These once obtained, "they are ready to put a roof upon the whole structure in the shape of a knowledge of homeopathy."

Now, what impression this kind of talk is likely to make upon the present generation of homeopathists I will not undertake to say, but to those who, like myself, are able, from personal recollection, to contrast it with the claims and pretensions so uncompromisingly put forward by the earlier disciples of Hahnemann, it must appear woefully like preparing for a full surrender. Granting that homeopathy is really the science of therapeutics—as was once held to be a demonstrated fact—of what consequence, comparatively, is the superior equipment in all other respects of a medical college which does not teach "similia?" And, on the other hand, if a knowledge of homeopathy is now to be regarded, not as the foundation, but as merely the "roof" of the educational structure, can anyone tell me for what reason—apart from the conservation of vested interests, and the promotion of individual ambition—the sectarian name and organization should any longer be maintained?

As the matter stands, no wonder that even such a stalwart as Dr. C. E. Fisher, of Chicago, should have "warned the British Homeopathic Society, at its last meeting, that he saw "a great danger of homeopathy losing ground, for the reason that the younger men in our ranks have much more formidable opposition to contend with than formerly, the methods of the old school being to-day so much in advance of those formerly in vogue." G. L. F.

To the Editors of THE MEDICAL TIMES:

The interesting account in your March issue of "Surgery Among Birds," recalls an instance reported by the writer several years ago, but it may, perhaps, be worth repeating.

A farmer living in Breckville, O., some fifty years ago, was a close observer and enthusiastic lover of animals. One summer's day, upon going into his barn, he espied a swallow's nest. Climbing up to the nest, he found in it two young swallows, one of which was more fully fledged, and larger than the other. Taking up the feebler bird, he was surprised to find one of its legs carefully wrapped with horse hairs. Upon gently removing the hair, he was astonished to find the leg broken. Replacing the fledgling in its nest, he awaited further developments. The next day he again found the leg carefully wrapped as before. A few days afterwards he observed that the hairs were being gradually removed. (The attending surgeons in this case were of course, supposed to be the parent-birds doing their skillful work "on the sly.") Finally, the hair bandage having been all removed, the farmer found the bone perfectly united by a firm calus, and the happy family flew away. W. F. M.

The Kinetoscope in Surgical Instruction.—At the meeting of the British Medical Association just held at Edinburgh, says the *Revue Scientifique* (Sept. 3) as translated for the *Literary Digest*, M. Doyen read a paper, with illustrations, on the services that kinetoscopy can render to the teaching of surgery and in divers operations. This method, which enables us to follow all the details of an operation, has various advantages over simple projections and stereoscopic views, of which the principal are the following: (1) The considerable enlargement of the negatives and their rapid succession render all retouching impossible; (2) the indefinite reproduction of the negative facilitates popular acquaintance throughout the world not only with operatory processes, but also with the skill and personal qualities of each surgeon.

No confusion will in future be possible between processes often imperfectly discriminated by those who have had access only to descriptions and designs that are not sufficiently detailed. Still further, the surgeons of all countries can, without the trouble of going to visit the principal surgical clinics of the two worlds, decide in advance in which places they will be likely to learn most.

The speaker thinks that from the point of view of instruction, demonstrations should be made in the following manner: The professor or lecturer first describes the operation, whose different stages are from time to time represented with the aid of fixed projections representing either schematic designs or certain of the kinetoscope pictures enlarged and selected for the purpose. The method being once described, the operation is then shown by means of the kinetoscope, just as it was really performed.

This kind of animated photography of operations is also interesting as giving the surgeon a chance to see himelf operate, and consequently of modifying detail of his technic, if he thinks proper.

The following extraordinary instance of coincidence is reported in the *Lancet:* A patient at the age of ten years fractured his right forefinger. It happened on August 26. When thirteen years old he fractured his left leg below the knee, through falling from horseback, also on August 26. When fourteen years of age he fractured both bones of the left forearm by stumbling, his arm striking the edge of a brick; this also happened on August 26. When fifteen years of age, on August 26, he had a compound fracture of the left leg above the ankle, by his left foot being caught under an iron rod and his body falling forwards. Next year, again on the same date, August 26, he had a compound fracture of both legs; after this he did not work on August 26 for twenty-eight years; but in the year 1899 he forgot his fateful day and went to work, with the result that he sustained a compound fracture of the left leg. Since then he has studiously avoided working on August 26, though never missing work at other times.

MISCELLANY.

—A hydropathic clinic has been established at the University of Heidelberg.

—Dr. H. Holbrook Curtis, the nose and throat specialist, thinks the use of the electric cautery in the nose is unsurgical and unscientific.

—All the penal institutions are to be grouped on Riker's Island, and Blackwell's Island given over entirely to the Department of Charities.

—Tuberculosis, according to the French War Office reports at Algeria, occurs at the rate of 1 to 36.9 among the Jews; in all others at the rate of 1 to 9.3.

—The widow of the late Sir Morell Mackenzie is earning her living as a modiste, and is about to sell her late husband's library to raise money to live on.

—A taxidermist of Reading, Pa., recently died of malignant diphtheria, contracted, it is said, from a raccoon which he had mounted some days previously.

—One grain of the bichromate of potassium dissolved in four ounces of water, a teaspoonful every two or three hours, will be found to give relief in loss of voice, hoarseness and in bronchial coughs.

—Harriet O. Evans, a Christian Scientist of Cincinnati, who attended Thomas McDowell, a typhoid fever patient, in a fatal illness, has been found guilty in the police court of practising medicine without a license.

—Starch digestion has been found by experiment to be much more rapid in arrowroot than in any other starchy food, especially corn, potatoes and wheat, and therefore much more valuable as an invalid diet.

—The Iowa Supreme Court has rendered a decision of much interest, in which it is declared that the State Board of Medical Examiners has the right to revoke the certificate of a physician if it thinks him incompetent to practice.

—Some of the courts in this city provide bibles covered with celluoid, which are sponged after each kiss, so that no contagion is communicated. But why kiss the bible at all? The oath would be equally binding without that form.

—The *Sun* says that Dr. Henry Courtney, of Hancock Junction, Delaware County, although 109 years old, makes daily calls on his patients, and when President McKinley called for volunteers in the Spanish war he offered his services as surgeon.

—We learn from a Havana paper that one of the most dreaded diseases now prevailing in Cuba is a grave form of paludism, with generalized chronic odema, terminating ordinarily in death, to which has been given the very appropriate name of Weyler's fever.

—Dr. Anderson, in the *Charlotte Medical Journal*, recommends where the bladder is partially paralyzed by parturition or other causes, the throwing a large amount of warm water into the bowels. The result is a free passage, both from the bowels and the bladder.

—Dr. Samuel Kent, of St. Thomas's Hospital, London, it is said has discovered the special organism upon which vaccinia depends and has prepared pure cultures of the germs and has used them in vaccination This will do away with the argument against vaccination.

—In Berlin, says the *Dietetic and Hygienic Gazette*, the bakers have been induced to prevent contamination from handling or from the dust of the streets by enclosing each loaf, as soon as baked, in a loaf-shaped paper bag, which is quickly sealed by twisting the open ends.

—Dr. John Inglis recommends, in the *Columbus Medical Journal*, cimerfugia in rheumatism of the womb; caulopdillin in menstral spasms; pulsatilla for menstrual headache when the patient is pale and nervous, and menris scartz and netonius when there is a feeling of uterine weight and dragging, causing great mental irrtability.

—At the sale of effects of the late Sir Richard Quain, at 67 Harley street, last week, quite a sensation was caused when the auctioneer submitted a square of old tapestry from the servants' hall in the basement of the building, which apparently had been thought to be of little value, but which, after a spirited bidding, realized 250 guineas.

—At Passy, a suburb of Paris, recently, an abused wife avenged herself on a drunken husband by inflating his rectum with a pair of fire bellows. Alarmed by the heart-rending cries of her maudlin victim she sent for a physician. The doctor could think of no cause for such intense abdominal symptoms but caustic poison, and was about to report the case to the police authorities, when the guilty wife confessed.

—Prof. Lupsic found in a primeval forest in almost an unknown land, between the western Ghat Mountains and the Arabian Sea trees whose dark yellow leaves emitted a tiny spark and a distinct electric shock when touched by the finger. Even at a distance of eighty feet the tree had a strong influence on the magnetic needle. The electricity was strongest at noon and almost entirely disappeared at midnight and in wet weather.

—R. Lehmann states (*Sem. Med.*, November 2) that if the patient keeps his eyes completely or partially open during the chloroform narcosis, and opens them whenever you try to close them, you can expect some accident, more or less severe. This phenomenon was noted twenty-one times in 329 anesthesias, and in each one there was either continuous vomiting, arrested respiration, peculiarly protracted agitation, or asphyxia and syncope, requiring artificial respiration.

—Dr. Andrew H. Smith, in speaking of pneumonia, says: "The lung differs from all other structures in having two separate circulations, the nutritive, supplied by the left side of the heart through the bronchial arteries, and the functional, supplied by the right side of the heart through the pulmonary artery. This double circulation underlies all the phenomena of pneumonia, and must be recognized in any definition of the disease, as without it the disease itself could not exist."

—The Ninth International Congress against the abuse of alcohol, to be held in Paris, April 4th to 6th, 1899, has appointed Dr. T. D. Corthers, of Hartford, Conn., foreign corresponding secretary. This Congress is presided over by Dr. Legrain, an eminent specialist, and superintendent of the Asylum of the Seine for Mental Diseases. The preliminary programme gives the names of several of the most prominent medical men of Europe as readers of papers on the scientific side of the drink problem.

—W. A. Freund contributes an article to the *Munich Med. Wock.*, of Nov. 29, that will create a sensation among the admirers of Goethe, as he states that the fact of the early death of his children and the degeneracy of those that survived, studied in connection with the history of his own illnesses, indicate a specific disease cured with specific treatment. The lesions mentioned in his letters, his reference to "Don Sassafras," and his later relapses support this view, which Freund claims explains much of the medical, chemical and philosophic tendency of his writings.

—The late Professor Baron, a member of the faculty of law at the University of Griefswald, has, says the *Lancet*, bequeathed a sum of $125,000 to the city of Berlin, for the purpose of erecting a home for orphans. The professor was a strong adherent to the principles of vegetarianism, and in his will he stipulated that none but vegetarian food should be used in the home. In addition to being a fervent vegetarian, he also looked on the medical profession with disfavor, and there was, therefore, another paragraph in his will to the effect that medical men were to be excluded from the Board of Managers, and that in cases of illness the advice of a "hypro-therapeutist" was to be obtained. The Municipal Council is in great difficulties in connection with this legacy, especially its last mentioned proviso.

—Some of the more advanced of the physiologists now claim that the back lobes of the brain are the seat of the highest intellectual facilities, a theory which is in direct opposition to that of the phrenologists and to popular opinion as well, the latter being that a high forehead is a proof of superior intelligence. To the large hind head has been attributed an unusual degree of animalism. Dr. C. Clapham, an anthropologist of high repute throughout Europe, has given arguments in favor of the posterior lobes in a recently published paper, which shows that man, of all creatures, has the most highly developed posterior lobes, and that the ablest men and races have them in the highest perfection. Idiots and confirmed lunatics, according to his investigations, have these imperfectly developed or in a very bad state.

ORIGINAL ARTICLES.

THE CIRCULATION OF THE NERVOUS SYSTEM.

By Herman Gasser, M.D., Platteville, Wis.

Part III.

WE have learned that the universe is governed by never failing and unerring law and order with which nothing interferes, and as students it should be our business to learn that order in all its manifold windings and govern ourselves accordingly, for to know how to do right we must know what is right. Nature is "never kind or cruel," always constant in its workings and obedient to its system. The original germs of all our formulated scientific ideas lie buried in the far distant past. On every hand we find conceptions in philosophy, morals, religion and science among the early students and writers of recorded history, in which, if we are charitable enough in our analysis, we will find that these great thinkers of the past all were actuated by the same controlling impulse; to do good, and to learn the truth. One works along the unity of doctrine, the other, the unity of nature, and each must be his own judge of the comprehensiveness and far-reaching power of the methods, for they are both hitched to the same car. As students and physicians, we need not pay any special attention to either, but to study the body as a physiological and psychological whole and thereby avoid being sidetracked into all the various intellectual fads and isms with which we all are so familiar. The experience of the past demonstrates that all great truths and discoveries are always revealed along the lines of simplicity, that they are always related and in harmony with the great body of truths into an organized general whole. It is such experiences that have caused us to formulate all phenomena into the reign of universal law. The common testimony of all mankind bears evidence of this truth, for we call those men great who, with their penetrating genius, in their active and tireless work saw things as they actually are; this is the measure of their worth.

All that we know of matter and motion is that they are names for certain phenomena; of the reality, the why, or the power behind or within we can know nothing. Intelligence will always be limited by the how the forces work; their relations or reactions with one another, and we call them laws of nature.

Birth and death, disease and health, are now known as mechanical changes in the regular order of law; that the work performed in each is the result of pre-existing organized energy and its chemical transformation. While we may go down and into the framework of the individual organism and the delicate structure of the cells by means of every power of scientific analysis, yet the ultimate power of observation is still a closed book that eludes and can never be reached by our minutest research, and while scientific investigation may systematize them into a related whole, it can never pass the limits of the common observation of mankind. Just as you might understand every detail in the mechanisism of the construction of a watch, yet it would keep time for all alike. So one ignorant of the functions of the nervous system in all its ramifications and details may not have so clear a conception of its harmony of relations, yet it would be of kind. The one is more familiar with the mechanical details, but as limited and circumscribed in the conception of the ultimate reality.

Leaving these general considerations, let us take a cursory view of the anatomy and function of the brain and nervous system. That the brain is the central organ of the nervous system, like the heart of the circulatory system, is conceded; also, that the nerves leading to and issuing from the brain are like the veins and arteries leading to and from the heart. that the sensory nerves have special and always centripital functions and the motor nerves outward or peripheral direction of function or distribution of energy.

Another and very important fact is that nerves are organized to transmit nervous energy with least resistance and greatest rapidity. This is not true in the assimilation of their forces transmitted by the sensory nerves to the brain, for the brain is, above all things else, an inhibitive organ; it delays the nervous sensations carried to it. This is its distinguishing function. It does this because it has no such well organized transit lines for the transmission of nervous energy. It was demonstrated by Helmholtz that nervous vibrations or energy is twelve times slower in the gray than in the white nerve matter. This is why it is an inhibitive organ.

The irritation of a special sensory nerve will necessarily affect those brain cells with which it is in closest contact or connection and then advance farther and farther, connecting with other organized sensations. To illustrate: A child is asked how much is two and three; this is carried by the auditory nerve to the auditory center and transmitted to the frontal portion of the brain, where it comes in contact with the visual sensations, say, of two apples and three apples and so becomes an ideal state, the result of the association of newly acquired sensations. As these same irritations are continually repeated nutrition builds them up and they become organized. As they become organized or intellectualized they become weaker as ideal states, for they become more isolated and formulated, so that when the organized problem of two and three and five is asked it is no more difficult than the first, for it is only an addition of a single number to the already acquired and organized memory. In this way, by the slow and regular order of organization the highest ideal states of existence are built, and in this way every organism acquires an individual character, dependent on its inherent organization and the influences of its surroundings, or the feeding of its senses. This statement implies that that system of education is best which feeds the senses in such a regulated manner of well digested and organized experiences that will be most conducive to the maintenance of its energy and continuance in time.

It must be remembered, however, that the feeding of the senses, to produce ideal states of consciousness, is not confined to the schoolroom alone, or to the feeding of the special sensory nerves by well digested and organized experiences, for there are a multiplicity of other sensory nerves from every por-

tion of the body that must be constantly kept in view and receive proper attention.

The feeling in consciousness of hunger, with its discomfort and pain, becomes an all-absorbing attention, that for the time is a controlling passion which individually may cause theft and murder; and when general revolution and the overthrow of government, the result of the organic state of existence.

These movements, the result of the sensations, again in each individual and nation have characteristic forms of expression, dependent on the physical hereditary organization and their acquirements, that vary from the relatively simple and inactive to the most virile and complex forms, but all influenced and controlled by the predominant sensations that give them a common impulse to action.

While it is true that in those of strong and innate organization the character does not change, yet the ephemeral influences of the condition of the times modify and change the direction of the forces of their organization, and may even be weakened and changed by the practices that are injurious and destructive and so modify the character. In its last analysis it is all dependent on the inherent state of the organism and the feeding of the senses with its circulation and assimilation in the brain, producing the varied states of feeling and consciousness that are always expended as motor energy, volition, or will. As the brain cells in the frontal convolutions have no special or innate energy they are readily influenced by the irritations carried to them by the thousands of sensory nerves from every part of the body, so that the feeding of the senses must have a great influence in the moulding of thought and character; indeed, if these statements are true, they are only expressions of the organized brain and a measure of conscious intelligence, and in the same sense as the general life is felt as an indifferent state of feeling with all its variations from pleasure to pain. In those painful states of disease and injury that the experienced physician so frequently meets, an examination of the pulse will, with almost unerring certainty, at once give him an estimate of the real condition of the patient. The circulating nervous energy is more concentrated, with greater storage of power and volume in the vagus than any other nerve of the body and is why the heart's action is so accurate a measure of it.

It is the flux of the activity of every cell of the body we call the life of the organism, and as these vary so do the states of life, its feeling and consciousness vary, for the latter are but a motor expression, a measure of their function, and in the same sense as public opinion or public conscience is the measure of the average intelligence of the millions of units of which its social organization is composed. As the individual internal cells and organs are different, so the individuals of a community are of varying quantities. The one is the measure of feeling, the other. the estimate of the public life of a community.

The measure of the life and intelligence of an organism is dependent on the texture and power to assimilate, or organize, and send out nervous energy; a strong or weak circulation of the nervous system.

"Did you ever know a bald-headed fool?" is the remark I heard a good many years ago. At that time I was of the opinion that all wisdom, intelligence, and power was seated therein, and the remark to me was a comprehensiv and profound generalization. Further observation, however, has caused me to believe that bald-headedness is an evidence of denutrition, exhaustion, and decay. That bald heads can no longer assimilate new experiences and sensations as readily as others with a good head of hair—all things else being equal. The bald-headed man may have a finer and better organized brain and capable of thinking and acting more intelligently, still sensitive to the influences of the world, largely the result of his earlier training and organization, but of unequal energy for activity; capable of thinking, but incapable of acting with the same prolonged endurance. He may also be a fool. Nervous energy when strong and constructive builds up and is sent out as motor activity. When weak, it gives only a "pale cast of thought," it lacks virility. It may be well organized and accurate, yet of insufficient vitality to stand up. We meet this state almost daily among our student girls, the result of our cramming system of education. This is not only to its shame, but a crime of the first magnitude.

All general manifestations of feelings with their emotions and intellectual conceptions, their pleasures and pains, are in their last analysis reducible to the fundamental fact of the circulation of the nervous system and its varying energy and vitality, with its attractions and repulsions, desires and aversions, resulting from its organized experiences. It is the conception of the superior and inferior forms of emotional and idealistic states of existence.

The harmonious adjustment of all the bodily sensations is what we call the instinct of self-preservation, or the function of organized or hereditary memory. It includes the simple states of feeling that are almost without form up to the highest intellectual states of ideal vision. The weaker the power of continued attention and concentration of the energy of the circulation of the nervous system, the more limited is the faculty of education, and the less the power of adjustment to the varied forces of the world as a whole.

It is in these subjects with their enfeebled circulation of the nervous system that hypnotism and somnambulism are most easily produced, for it is now generally accepted by all competent psychologists that they consist of a concentration of attention. The whole of the available nervous energy is consumed by the many iterations of your own beliefs; the subject is in a state of abstraction, and within his limited sphere capable of instruction, of sufficient power to assimilate the formulated iterations of your instructions, but oblivious to everything else. Such states Beard described as "a functional perturbation of the nervous system, the activity of which is concentrated within a limited region of the brain, the rest remaining inactive, and thus producing a loss of volition." This theory in the light of the circulation of the nervous system, only partially, or inaccurately, states the real state of facts. The concentration of attention and consciousness consume the whole of the available ener-

gy disposable, so that the remaining functions cannot rise into the active or motor state of existence; there is no longer adjustment of the whole, and hence the abstraction. It is the measure and power of the function of the circulation of the nervous system. While it may be true that bright and educated men may be hypnotized, it is true only because their nervous energy is limited, so that in deep abstraction and concentration all their energy is consumed and can no longer adjust themselves with the other and weaker sensations. There is an hypertrophied state of "mentality," a fixed and all-consuming idea, a catalepsy of the intelligence which the "will" cannot control or destroy because of insufficient nervous energy. This is well illustrated in martyrs; in them the fixed idea or concentration of attention is so supreme that they can endure the extreme forms of torture with serenity, indeed, it only stimulates it, keeping it in the ascendency, so that the ordinarily painful sensations cannot reach the threshold of consciousness. There is no adjustment of the disturbed and disorganized sensations; the fixed idea and concentration is still supreme. In such states severe and painful surgical operations have been performed without eliciting the least feeling. These states of existence are conditioned by the volume and character of the function of the nervous system. With limited capacity and great power of concentration of attention we produce the fixed idea; while a greater capacity only causes an adjustment with other forces in harmonious relations, or well-rounded existence, in which all sensations are assimilated in their due proportion, creating new ideas and valuable results, in tune with nature, the spirit of the age and its great achievements.

In the hereditary and constructive forces of the development of the nervous system there may be parts that are congenitally weak, while other parts may be weakened by the accidents of life. These modify the whole of the functions of the body and give it a disproportionate and painful cast of existence. Then, again, we are still very much in the dark relative to the functions of the sympathetic nervous system and its related, yet unconscious, processes of life. The integrity of the "abdominal brain" (Byron Robinson) will, no doubt, in the future in a large measure influence our conception of the normal and pathological functions of the viscera, over which it has a controlling, yet unconscious function. Of its pathology, interesting and valuable as it would be, we at present know nothing. That the future will bring it into an established and recognized consideration we are fully warranted by the work of the past.

Nothing in the whole history of scientific research is more completely demonstrated than that the actions of all animals are the result of their physical organization. The acts of volition of brutes are as purely mechanical changes, the result of their hereditary organized memory, as the rest of their actions. Their conscious volition is only a part of the series of changes of their general activity. We say "an agent is free when there is nothing to prevent him from doing that which he desires to do. . . . If a greyhound chases a hare, he is a free agent, because his action is in entire accordance with his strong desire to catch the hare; while so long as he is held back by the leash he is not free, being prevented by external force from following his inclination. . . . He is a machine impelled to the chase, and caused, at the same time, to have the desire to catch the game by the impression which the rays of light proceeding from the hare make upon his eyes, and through them upon his brain." (Huxley.) The sense of sight and smell of the hound by a hare is so well organized in him, the result of the practices of thousands of his ancestors, that it is an organized memory, an instinct, and the scent or sight of a hare causes a volitional activity that is almost reflex in character. This again illustrates that memory is a material organization, a certain disposition of the nervous substance by virtue of which it may again be reproduced.

This expression of organized memory is equally as well illustrated in the human race by the sexual emotion.

It has been truly said that it is "the genius of the race making use of the individual to reach its own ends." Nothing in the whole series of natural phenomena is comparable with the wholesome, simple, and beautiful activities of life displayed by infancy and early childhood. As the development increases and the age of puberty with its new memories and emotions set in, there goes with it a change of character. The irritation of the terminal sensory nerves in the vas-deferans, filled with sperm cells, send sensory impulses to the brain that eventually assert themselves in consciousness as states of feeling of the first magnitude, and we call the passions, and around which the whole social fabric with the manifold expressions of its energies, its loves and ambitions, hates and excesses assert themselves, and in the guidance and direction of which a major share of our intellectual and social life is consumed. This illustrates that what we call conscious life is, after all, the synthesis of all the sensations in the brain as a physiological whole.

The leaven of scientific methods introduced into our educational system is working with wonderful and great rapidity; its influence is clearly seen in our literature and daily life, with all its hopes and ambitions. In this grand progress let us not forget that to make it enduring the whole body must be trained and developed alike, so that every part will respond almost unconsciously to the forces of nature, of which it is a part. As Maudsley says, "Each indulgence in passion, caprice, even oddity or perversity, notably makes easier the next step in the same direction; what a person sows hourly, good or ill, that shall he reap; the hypertrophy of passion and prejudice is the atrophy of principle and judgment."

There is scarcely a practice so destructive, an absurdity so apparent, or belief so foolish, that an ordinarily intelligent man fully comprehends and understands, that cannot be instilled by continuous practice into the mind of a growing child. It is the instinct of self-preservation, the organized habit of love for our posterity that causes us to teach our children wholesome and enduring organized experiences. An Iago might sacrifice friends and virtue, even life itself; but when confronted by his own flesh and blood, reorganized, re-immortalized in all its simplicity, purity, and beauty in the form of his son,

even he would stay his hand, for he knows that the feeble first threads of his jealousies that he cast about him and could break, but did not, caused him to throw out another and another, until he finds he is fastened by practice and habit, and becomes the incarnate literary villain of all time.

WHAT A PHYSICIAN SHOULD KNOW ABOUT THE LAW.

By Guy R. Johnson, Member of the Philadelphia Bar.

THE ordinary practitioner, immersed in the practice of his profession, does not think it necessary, as a rule, to inform himself on any points in regard to the law of the land, or of legal procedure. At the same time, in the practice of his profession it is well for a physician to remember that he is apt to be brought at any time in contact with the courts. By this I do not mean that he stands in danger of actions for malpractice, although this is one of the dangers of the profession, but that in the course of his ordinary daily duties he is apt to come in touch with the legal processes of his city, county, or State. Then again, if the practitioner aspires to become a medical expert, there are many points in regard to the law which it is necessary for him to know. I will endeavor to go into some of the essential features which constitute the basis for legal action throughout Anglo-Saxon countries.

The expression "common law" is frequently heard in legal circles, and yet it is a rather difficult term to define in a few words. It is the "unwritten law," the "lex non scripta," in contra-distinction of the "lex scripta," or "written law." The common law is the law of common things, which has been handed down to us by decisions, and by records of courts, and which pertains to the ordinary matters of life, which interest us all. Strictly speaking, it should not be called the "unwritten law," for it is in reality written somewhere, and it is accessible in the records of courts extending through generations. Possibly it is called the unwritten, because it is a changeable law, shifting and varying from time to time. It cannot be crystallized into statutes, to remain unchanged forever. But still, it is a very wrong impression to gather from this expression that it is really unwritten, for it exists in the court records, as I have stated. On the other hand, the "written law" is the statuatory law and it consists in ordinances passed by bodies which have the right of making laws.

Now, in passing to the subject of court procedure and taking up, first, the order in some of the lower courts, probably the first court which will attract the practitioner's attention is the coroner's court. This court and its powers varies in the different States of the Union, but, after all, it comes from a common source, and its powers are largely the same, although they may be veiled under different designations.

The coroner's office in the days of feudalism was an office of the crown or king, hence is derived the name of coroner. One of the high officers of the court had as a rule, in addition, the subordinate task of attending to the duties which we now commonly associate with the coroner's office. The evolution of the present coroners is interesting; formerly they were of three classes: First, the coroner by virtue of his office; secondly, the coroner by virtue of his charter or commission, and thirdly, the coroner who was given his office by county election, by popular vote. The third form, of appointment of a coroner, is the one which prevails in this country to-day, but it is really simply an evolution of the old form of appointing this officer. The position of coroner is one which carries with it dignity and responsibility, and it should be filled by men of standing and ability, for, as a rule, this officer has the power to investigate crime, and the magistrates' power of committing prisoners for trial. The duties, therefore, of a coroner are not simply to inquire into the causes of death. This happens to appear to the public to be his chief duty, but in reality, by statute, his task embraces much more. Not merely must he inquire into deaths reported to him, where the cause is uncertain, but he must investigate the matter of the possibility of the existence of crime. He must stand as a check between the public and the criminal. It is his duty to see that no case of homicide escapes prosecution by the commonwealth. This is the principal burden of his duties, but in some places he has also the power to investigate into the cause of conflagrations, and in other places with the disposition of property, especially that which is found concealed or buried.

Now, when you come in contact with him, you will want to know what are the rights of the coroner with regard to yourself. In the first place, he has the right to subpoena you, and you cannot refuse to obey. In case of a person found dead, the method of proceeding is for the coroner to call a jury to view, and the jury is collected from the citizens, generally of the neighborhood. Then usually a physician that is appointed has the duty of examining into the cause of death, and of giving his testimony before the jury. Your duties there are to make a post-mortem examination, and as a medical expert to give your testimony. It often happens that the young internes of a hospital are called upon to give testimony before the coroner's jury, and to state the condition in which the patient was brought into the hospital. In the first place, never be flippant in your manners; never be careless about the testimony you give; it is usually taken down stenographically at the time, and you may be confronted with it subsequently in court. Give an exact and careful statement. This statement applies as well to older physicians.

A word or two about the method of procedure here: If the case is very simple, after the verdict is rendered the burying may be allowed, and that is the end of the matter. But in a case when homicide is probable, or possible, the method is somewhat different. The jurors cannot be challenged; the person accused cannot be represented in the same way as before an ordinary court, yet the testimony given is not the less important. There the jurors are called upon to give a verdict; this being done, the case takes one of two courses. It may go directly to a higher court, but usually it goes before the grand jury, who must investigate into such cases.

There they give their report, and if the case is of sufficient magnitude they return a true bill.

Now, it is your duty as a physician to report to the coroner all cases that are uncertainties as to the cause of death. If the patient dies within about a day of coming under your observation, you should report to the coroner. It sometimes happens in a hospital that the physicians are unwilling to give a certificate of death, because then they are not allowed to make an autopsy. It seems always a bad thing, in my judgment, to do a thing in this way. If you can give a reasonable certificate of death you should do so, but if not, you should call the coroner.

We will next take up the magistrate's court. It is the same in some respects. The magistrate has authority over matters civil which do not amount to more than $100, and the first hearing sometimes of important criminal cases may come to him. As a medical man, you may be called occasionally to give your opinion before him. The rules are not as severe as before a higher court. Your testimony may relate to fees; it may relate to the mental state of the accused, and in the House of Correction cases you may have to inquire into a question of inebriety.

Among the other higher courts is the civil court, or the Court of Common Pleas. Any sort of civil cases may be tried before this court; any case of the smallest importance upward. The method of procedure is much the same in this court as in the Criminal Court. First, there is the prosecution, then the defense, then the rebuttal, and as a witness you should understand certain points in regard to your own examination. The method of procedure is first with the direct examination, then the cross-examination, then the redirect and recross-examinations. In other words, the procedure in the individual examinations resembles the procedure of the course in the entire case. Your chief duty, then, will be to express your views as a witness, either for the prosecution or the defense.

Now, you should learn how to carry yourself; as some one has said, "First, know the subject about which you are to speak; then behave as a gentleman." This seems hardly worth while to say, yet so frequently I have seen physicians go on as witnesses without really knowing what they were going to talk about. You should certainly see to it that you know more than any ordinary lawyer does in regard to the matter. It is very important to carry yourself in a proper manner; there is the witness who has the tendency to think it his duty to quarrel with the examiners, and then another is too much afraid, and so gets into difficulty. In the direct examination the lawyer has no right to ask what is called "a leading question," unless he is examining a hostile witness. You sometimes do hear, however a leading question; that is, one which suggests the answer to the witness. However, on cross-examinations leading questions are allowed. Always give your answers in simple terms, not in parrot fashion. I have heard physicians give their testimony in such fashion that it was evident to everybody that the witness had committed his speech to memory.

There are many peculiar methods of confusing a witness; one is by the use of categorical questions. These are questions which it is almost impossible to answer without stating what you do not wish to say. It is a method of dissecting your testimony and forcing you to answer in a way that will seem to you to be confusing and possibly humiliating. The only way to meet this style of examination is the straightforward, honest method. Do not attempt to quibble or quarrel over the meaning of words, but state your answers in such a way that will convey the impression that it is simply your desire to instruct the court; that you have nothing to conceal and nothing that you wish to force upon its attention. If you feel that, despite this frankness and honesty on your part, you are being pushed in any unfair way, you can then appeal, or your counsel can appeal for you, and you will have the opportunity of making a qualifying statement.

Besides these lower courts, it is possibly well to say a word about the higher special courts. In England these are the Admiralty Courts, which in the United States corespond to the United States Districts Courts, where matters of national interest are considered. According to the jurisdiction of the court will be the form of your subpoena.

As to the juries, there are the petit juries, in contra-distinction to the grand juries. There is one that you may have to deal with in medical cases. It is the sheriff's jury. If a person is alleged to be insane, the commissioner has the delegated authority of a judge, and he summons the sheriff's jury, and before them you may have to give testimony in regard to lunacy.

Medical, as well as other cases, may be appealed to one of the higher courts. In this State a few years ago we had simply a Supreme Court to which cases could be sent. Now we have a Superior Court and a Supreme Court. In New Jersey, the arrangement is still more colonial and more English than our own. In that state they have a Chancellor's Court and a Court of Appeals. In one way or another the medical expert will find that he will be called, or his testimony will be called to the attention of the latter courts. Besides giving testimony in open court, the physician may be called upon to testify in other ways; for instance, to give his opinion on some one else's testimony, or to testify as to the condition of a person when making what is called "the dying declaration," or the declaration of an individual, which, to be of force in law, must be shown to be the statement of a person who believes that he is actually in a dying condition.

HOUSE AIR CONSUMPTION.

By Geo. B. H. Swayze, M.D., Philadelphia, Pa.

At least eight-tenths of the cases of tuberculous disease of our country are not hereditary, but induced, and therefore are preventable to a very gratifying extent if the conditions of prevention were comprehended and faithfully employed.

The dismayful havoc of consumption pathetically demands that new and persistent investigations be everywhere made relative to active daily causes. The idea of contagion by bacterian ferment from other cases is too shadowy and flaccid to ever squarely fill the physiological requisites which so stealth-

ily wreck so many constitutions. This newer theory is as deficient in functional logic as is the older myth—the doctrine of broadcast transmission of phthisis from generation to generation by the act of parental conjunction. The doctrine was made as elastic as an india-rubber string. If the disease fortuitously skipped a generation or two, the pet theory was stretched to accommodate itself to the third or fourth generation, or some branch of the same, perchance, forgetting that unless a child is born with tuberculosis it has not inherited tuberculosis, for its parental physical heritage is just what is in its blood and organization when born and what is nursed from the mother's breast prior to weaning. Outside of the type stamped by paternal agency, the physical material after weaning of the child is elaborated from other sources, and its subsequent diseases are then induced by inharmony or unsanitariness of daily conditions.

It is needful that we press our researches for cause and prevention in new or neglected directions; get down to study of new or unused ground about incipient and failing cases; get utilizing hold of actual vitalizing and devitalizing conditions of humanity that are in continuous effect, or may be so, if practical solution of the disheartening problem of consumption is to be grasped. If the tests of but half a generation were scrupulously made, it could be proven that the causes of three-fourths of the cases of general debility and pulmonary disease that enshroud the homes of the people are winnowed into the lungs and blood by respiratory process, the inhaled deteriorants constantly wearing on the lung-tissues, and blood corpuscles and eliminating functions and general constitution, beginning at birth, if not before.

If absence of respirable air means death, then relative impurity of breathing-air means co-relative depression of vital energies. If damaged food impairs the organs of digestion, damaged air will as certainly injure the organs of respiration, and through said injury reduce the vital processes of the constitution. Disabled lungs must keep up their usual motion without rest or respite. Thus diseased process in the lungs tends to be progressive as long as air inspired continues irritating and impure. While impurities from sewage, stable and sty, mustiness, house-dust, crowded and close rooms are somewhat recognized, the dominating source of progressive debility, injured lungs and malnutrition is the corrosive carbonic oxide, or fuel gas, mixed with the breathing-air of so many houses, business places, neighborhoods of public works, factories and city air in general. The fact that this quite universal, continuous cause of blood poverty has been quite universally overlooked and inadequately defended against, explains the occasion of much croup, asthma, and the persistent development of consumption.

Though drugs will assist nature, the sovereign potency of healing, as well as of destroying, resides in the functions of respiration, according to the degree of purity or impurity of the air inhaled. Seventeen millions of air cells, representing an area of nearly 1,800 square feet of aerating tissue, meet at each breath of air and its contaminating admixture of poisonous gas and other debris a thin layer of venous blood craving to be oxidized and purified before returning to the cells and tissues of the system. With reduced oxygenation and elimination, depurative matter is increased, especially at night when houses are shut up with their gases of combustion by fires and illuminants. Unless effete matter be steadily removed from the economy, it becomes obstructive, irritative, suppurative, destructive.

A great and enduring advance in prevention will have been attained when families have practically learned, by daily cautions, that the persistent lung disease which so many develop and die of, is simply confined air consumption. While in the flesh, all humanity have but one world of natural elements in which to live, and but few conditions of existence which responsively and potentially either promote health or induce disease. Our adjustment of these conditions, which it is very largely within our personal power to do, is the human regulation of these diverse results to degrees of remarkable certainty.

Repetition of the effects of the ordinary house-made mischiefs of house-air is constant and importunate. All the exhaled impurities and emanations from individuals are at once neutralized and lost in the sea of outdoor atmosphere. But when most persons go indoors there is an immediate change of conditions in houses, lodgings, work-places. The oxygen of the relatively confined indoor air, which is consumed by the burning of fuels and illuminants, is replaced by high percentages of carbon dioxide and monoxide gases, which mix their stealthy poisons with the exhausted breathing-air of the rooms, offices, stores, shops, etc. To exclude dust and cold the doors and windows of private houses and other buildings are usually kept closed—possibly weather-stripped or packed besides to bar out replenishing current. Disease in some form is developed in such a house—and through the wear and rasp of such confined impurity on the lungs, eventually, in many, tubercular clog and consumption.

Any temporal agencies in house-air which naturally develop lung disease, also tenaciously impede recovery from lung disease after its induction. Tubercles are not the cause, but the concomitants, of phthisis. Seldom do people consider the real tasks of the lungs. As perpetual strainers between the corruptives of breathing-air and the impurities of venous blood, it is but rational to comprehend how the minute air-cells gradually clog and ulcerate. Hence a defaulting condition of the blood is linked with the production of tubercles.

GANGRENE.

By E. Franklin Smith, M.D., New York.

DEFINITION: Gangrene means death of tissue invisible and more or less circumscribed masses. (Park.)

Classification.

Clinically, (1) Moist; (2) Dry.

Etiologically, (1) Direct, *i. e.* due to direct action of agent; (2) Indirect, *i. e.*, due to cause at some distance; (3) Specific forms of gangrene, due to special micro-organisms.

Dry Gangrene.—The part dries up without any

marked putrefactive changes. Also spoken of as senile gangrene. Part dries up, is hard, fat infiltrates the tissues, which become greasy, and make the skin appear more or less transparent. It spreads slowly; no ordinary putrefactive changes; slight musty odor; much pain, with loss of sleep and exhaustion.

Moist Gangrene.—Essential features of this form are the putrefactive changes resulting from growth of micro-organisms. Too rapid a process for liquids to evaporate. Bullae containing a dark fluid with foul smell form on the surface. Epidermis peels off, surface then being red, then passing through various stages from green to black. Tissues swollen, due to gas; this gives sensation of crepitation. Absorbtion of poisonous products lead to asthenic fever and exhaustion.

The Line of Separation.—Results from inflammation in living tissues at that point. Dead tissues act as irritant, the inflammation going on to stage of granulation, then to suppuration.

In dry gangrene, fresh lines of separation may form higher up; this may be due to:

(1) Excessive inflammation leading to death of tissues.

(2) Inflammation not excessive, but vitality of tissues low.

(3) Extension of original cause of the gangrene (thrombus).

(4) Extension due to entrance of micro-organisms.

Treatment of Gangrene: Local Treatment.—Great principles are (1) prevent sepsis; (2) permit and promote evaporation of fluids in dead parts. Thoroughly disinfect the area about to die, especial care being given to folds of nails. Keep wrapped in antiseptic dressings.

Question of amputation considered later.

General Treatment.—Consists of suitable nourishment, stimulants, anodynes, and attention to excretions.

The Varieties of Gangrene.

I. Direct Gangrene.

(1) Gangrene due to crushing. (2) Gangrene due to pressure. (3) Gangrene due to acute inflammation. (4) Gangrene due to heat or cold.

1. Gangrene Due to Crushing.

Death of tissue is immediate. Moist form is present; if not rendered aseptic, typical appearances of moist gangrene follow; if rendered aseptic at once local and constitutional signs of moist gangrene do not follow; the dead part does not irritate and healing occurs the same as by blood clot.

Do not amputate at once unless certain that the parts beneath must die as result of absence of circulating blood, or that they must become useless from loss of nervous supply. Condition of the patient must also be considered.

2. Gangrene Due to Pressure.

Here we have to do with condition known as bed-sore. Prevent pressure upon prominent points of bone by water-pillow, keep parts dry, change position of patient, keep sheets smooth, etc.

Bed-sore once formed should be kept aseptic; use circular water-pillow; balsam Peru dressings.

3. Gangrene Due to Acute Inflammation.

Death here is the result of extensive occurrence of stasis or extensive exudation pressing on vessels. Occurs especially in dense tissues. Examples of it are boils and carbuncles in the skin and death of portion of bone where the bone and periosteum have become acutely inflamed.

4. Gangrene Due to Heat and Cold.

Burns and scalds will be considered later. Parts affected by cold are those situated distant from the heart, especially the toes, fingers, nose and ear.

Cold first causes contraction of vessels with slowing of the circulation and the parts become white; or if exposed to warmth, the vessels may dilate, stasis and thrombosis occur, both in parts affected and in internal organs.

General symptoms.—Increased circulation and pulse-rate and slight rise in temperature at first; later, the temperature falls, irresistable drowsiness comes on, staggering gait, slow respiration, coma and death.

Local symptoms.—Three degrees of frost-bite as follows: First degree: Bright red wine color in the part which can be pressed away with the finger, with slow return. Skin swollen and oedematous, with itching if exposed to heat. Effect passes off in few days; if further exposure, chilblains are produced. Second degree: Blisters form containing bloody fluid, followed by rapid ulceration, *i. e.*, an acute spreading ulcer, which is atonic and slow in healing.

Third degree: This is marked by death of certain tissues. The skin becomes livid; large bullae, filled with rusty-colored serum, appear; sloughs, which are dry, white or black, appear. This stage usually results from sudden exposure of the cold part to warmth.

Prophylactic treatment.—Warm clothing to exposed parts. Diet should contain large proportion of fat. Avoid alcohol. Keep parts thoroughly dry.

General treatment.—Do not apply heat too quickly. First rub the parts with snow or cold water; do not bring patient into a warm room at first. Alply friction as he recovers and give cold drinks with a little alcohol. As patient gets warmer, give warm drinks and bring him into a room of moderate temperature.

II. Indirect Gangrene.

(1) Gangrene due to gradual diminution in the caliber of the blood-vessels. (2) Gangrene due to some sudden obstruction of the blood-vessels. (3) Gangrene due to imperfect innervation. (4) Gangrene brought about by certain general causes, such as diabetes, acute fevers, the use of ergot, etc.

1. Gangrene Due to Gradual Diminution in Caliber of the Blood Vessels.

Cause of Senile Gangrene.—(a) Conditions which lead to endarteritis, as alcohol.

(b) Syphilis, also leading to endarteritis.

(c) Atheroma of the artery.

Symptoms of Senile Gangrene.—Chief complaint before appearance of gangrene is great coldness of the feet, not relieved by warmth. There is tingling and a feeling as if there was something between the ground and the feet. Examination of the blood

vessels shows them to be rigid with but little pulsation. With these symptoms one should be on guard against the occurrence of senile gangrene. Bath at temperature of 90 to 94 degrees, with friction, should be employed. Patient should be cautioned against any injury to his feet, paying special care in paring his nails and tending to his corns.

Further history of the case is that the patient gets a wound of foot or toe, this becomes inflamed, and the inflamed part dies. Gangrene is slow in progress and we have the appearances as described, *q. v.*

Treatment of Senile Gangrene.—Disinfect parts, especially nails; wrap in antiseptic gauze; elevate limb slightly. Generous diet and fresh air, and relieve his pain. In the great majority of cases of senile gangrene, amputation should be performed early (Cheyne).

2. Gangrene Due to Some Sudden Obstruction of the Blood Vessels.

Cause.—(a) Tight bandages, where parts below swell.

(b) After fracture, broken end pressing on vessel, or from rupture of blood-vessel.

(c) Ligature around a vessel when little collateral circulation.

(d) Embolism, followed by thrombosis.

Symptoms.—In arterial obstruction, limb becomes pale; later assumes a dark, livid color, followed by various changes noted in moist gangrene.

If venous obstruction, the part below becomes oedematous and dark.

Treatment.—If arterial obstruction purely, wait twenty-four hours to see if collateral circulation becomes established and how much will probably die. In regard to seat of amputation, it depends on anatomy of arteries.

If arterial and venous, or venous obstruction alone, amputate at once.

3. Gangrene Due to Imperfect Innervation.

Gangrene comes on quickly and is usually moist, often spoken of as acute bed-sore, in cases of paralyses. Treat these cases by warmth, change of position, etc., and, if sloughing occurs, treat as a bed-sore, *q. v.*

Raynaud's disease, or "symmetrical gangrene," occurs on both sides at the same time. Affects the fingers more often than the toes. Is limited in extent and depth, seldom going deeper than the skin.

Phenomena which preceed the gangrene. (1) local syncope, (2) local asphyxia.

In local syncope, the arteries are contracted and the fingers become white, usually the result of some sudden mental shock; fingers lose their sensibility and are very cold. Attacks last from a few minutes to a few hours.

In local asphyxia, the circulation of the blood is not entirely arrested, so that the blood in the part is practically venous. Fingers look livid, as though dipped in ink. Some swelling of fingers with shooting pain. Lasts a day or two, and may or may not lead to gangrene.

Gangrene is the final stage of Raynaud's disease. Darkness of fingers persists, pain increases, small bullae form on fingers, and one thinks patient is going to lose fingers. Ultimately, the circulation improves and a very small, dry slough separates. The process is very slow.

Treatment of Raynaud's Disease.—Remedy any uterine trouble. Apply warmth to fingers. If sloughing, antiseptics. In no case is amputation required.

4. Gangrene Due to Certain General Causes.

(a) Due to Diabetes.—Vessels in diabetes are thickened, due to some irritant circulating in the blood which sets up an endarteritis. Tissues are weak and less able to resist injury and entrance of pyogenic organisms.

This belongs to the moist form, and is accompanied by an excessive amount of inflammation.

Treatment consists in the avoidance of injuries, attending to the general condition of the patient, anti-diabetic diet, etc. Once gangrene has occurred, opium in larger quantities, *i. e.*, codeine, ¼ grain doses three times a day, increased up to five grains.

Amputate as early as possible with strict asepsis.

(b) Due to acute fevers, especially typhoid and typhus. Here gangrene attacks the parts distant from the heart, toes, nose, ears, and fingers. May be due to an endarteritis or an embolism. It is of dry variety, and unilateral. Wait before amputating on account of weak condition of patient.

(c) Due to use of ergot. Sometimes occurs in epidemics, in regions or in families, due to infection with the claviceps purpurea. Before occurrence of gangrene there is diarrhoea, buzzing in ears, hyperaesthesia, cramps, cold extremities, etc.

When gangrene occurs, it is usually dry. It occurs more often in men, between 30 and 40 years of age.

III. Specific Forms of Gangrene.

(1) Acute traumatic gangrene, (2) Phagedaena. (3) Cancrum oris or noma.

1. Acute Traumatic Gangrene.

Due to growth of bacteria in tissues. Disease usually begins second or third day after the accident, before granulation has occurred. Organism has not yet been isolated. Disease is very rare. Rapid development of gas in tissues is characteristic of this form.

Course of disease is very rapid, death usually occurring on the third day. Wound is hard, oedematous, shining, tense, and the skin dark, livid or red. Crepitation is marked. It spreads with all appearances of moist gangrene, bullae forming with foul smelling contents. There is usually no fever.

Treatment is immediate amputation above the gangrenous mass (5 per cent. recovering).

2. Phagedaena.

Extremely rare now. Two forms described (a) ulcerative and (b) gangrenous.

(a) Ulcerative Phagedaena.—Here a pulpy membrane forms on the surface of the wound, beneath which cup-like losses of substance occur, rapid ulceration which spreads.

(b) Gangrenous Phagedaena.—Wound is covered with a thicker membrane, rapidly extends in the cellular tissue radiating from the wound, leading to rapid sloughing of skin, muscles, etc., the patient dying in twenty-four hours.

Treatment, of course, is prophylactic. Destroy the pulpy mass by actual cautery. If an extremity is affected amputate.

3. Cancrum Oris.

Affects children usually, attacking mouth or vulva. In the mouth, it begins as ulceration of the gums, the patient complaining of pain, the breath is foul, the saliva is increased, running from the mouth. Inspection shows an ulceration with sloughy edges. May begin on cheeks. The cheek becomes swollen, shiny, a spot appears, which soon becomes black, and is, in fact, a slough, which goes on spreading.

Treatment consists in clipping away all the gangrenous tissue, then rub in strong nitric acid, allowing it to act for ten minutes, when soda should be used to stop the action. Anything short of this treatment will fail in arresting the disease.

MIDDLE EAR DISEASE IN GENERAL PRACTICE.

By A. H. Harriman, M.D., Laconia, N. H.

BY way of introduction, allow me to preface my article on middle ear disease by referring to my reason for selecting this particular subject. In the first place, I believe that this class of beings who are known as general practitioners, and who, by the way, are rapidly becoming extinct, should be ever at the heels of the specialist. He should use the specialist for all he can, but at the same time the all round doctor should not be much in the rear of this scientific leader; and this is better than at first seems, for the specialist is constantly driven into new fields and eternally broadening the horizon of his own special knowledge, and the other fellow is doing work that a few years before was a privileged knowledge to the few.

In the next place, this is the only salvation for a large class of the most useful men in medicine, thereby rendering themselves serviceable to their clientiele and worthy of the title, "Doctor of Medicine." The time has fully come when doing nothing but dealing out potions of medicine, and contending about minor affairs pertaining thereto, is rightfully a small part of one's duty in the practice of a profession which we unhesitatingly parade before the public as the most laudatory of all professions or callings.

Quacks and men with no medical education can confine themselves to "medicine" giving alone, and have as about as good success in the eye of the public as the real medical man who never invades any of the now many fields of the specialist. We must attack disease anywhere in the human body, and we must do good work and meet with ordinary success as compared with the best.

But there is one command whose clarion tones we must learn to hear and heed above anything else—"Be sure you are right;" know it all and be master of every possible situation of the case in hand. No one can do more. Then let us unhesitatingly "go ahead" and confidently expect about the same results that attend upon the fellow who alarms us with direful results that wait upon all save the distinguished specialist, and suavely advises us to stick to "granny" medicine for solace, eminence and endowment.

Honestly avowing these principles, allow me to suggest some mal-conditions of the middle ear, and the treatment therefor, which every man in a general practice will have opportunity to see sufficiently often and in which to become well versed. In studying disease in any locality, one should invariably learn the natural conditions in order to be able to detect the abnormal. Recalling your anatomy, it will be remembered that the ear canal is curved with convexity slightly upward and forward; that a portion of this canal is cartilaginous and a part is bony, and that the lumen is oval, thus affording abundant evidence that the expanding blades of the old-fashioned ear speculum are wrong in principle and totally misleading in practice. Probably the best instrument for inspecting and treating the auditory canal, membrana tympani and middle ear, is the ordinary nest or set of metal specula, of varying sizes with slightly ovoid points. As the ophthalmoscope is the sine qua non of the ophthalmologist, so the head mirror and ear speculum is one of equal importance to one who essays to be in any degree an aurist.

With a small amount of experience, but an immense amount of attention to minute detail, an ordinary general practitioner should be fairly expert in translating the various images displayed upon and in the drum-head, both in health and in disease. In health, the reflex should be triangular with acutest apex near the point of the long process, which is near the center of the membrane; from here the light spot should direct downward and forward, and any deviation from this rule indicates abnormal structural change.

In acute suppurative diseases of children the membrane is usually ruptured, and as surprising as it may seem, thousands of these cases make complete recovery with no medical attention whatever, for they occur all over the country and but few men in general practice give them much special attention, and for the reason I suppose that none seems indicated, but then some ears are liable to give trouble in later years, which would indicate that a complete recovery had never been obtained; and again, it is not unusual to see ears that have been discharging pus for a very long time, or from the first attack to the time when the individual had arrived at maturity and felt the necessity of making a desperate attempt to get well.

To relieve the "ear-ache" of acute ear disease is not always so easy. If the child is old enough to take kindly to instruments and other paraphernalia, or if an adult, the fountain syringe with warm water flowing under light pressure for ten minutes will give much relief; but for small children warm fomentations to auris and side of head with small doses of morphine, will usually suffice. When accompanied by rupture of membrane and discharge of only serum, healing will occur usually without medical attention beyond that of general care to the individual. But acute pus inflammation of the middle ear after rupture has occurred will require, for safety, daily special attention. I prefer myself the clearing and drying of the canal and drum-head with bits of cotton on an applicator, then to blow in a

small amount of boric acid. With these mild agents few cases will persist in discharging longer than ten days.

In chronic non-suppurative inflammation of the middle ear one observes a great variety of manifestations. Instead of the drum-head having the appearance approximating normal skin, situated in a protected locality, there will be seen at times a pink, red margin about the M.T., and in more severe affections the same redness will extend along and include the long and the short processes, or the whole membrane may be one red field. Again, no redness will be seen, but the membrane exhibiting an opaque, watery look apparently devoid of all blood vessels; or there may be a thickened condition entirely demonstrated by the eye alone. Then there will be all degrees of depression and less often a bulging condition. The degree of lack of hearing in this disease varies greatly. Some of the many subjective symptoms, and the most troublesome is *tinnitus;* others complain of pain, itching, bubbling, and a crackling sound. If the drum membrane is intact, treatment will have to be directed to the throat and post-nasal and nasal spaces. Here remedy the local condition regardless of ear symptoms. It is in this state of affairs that the Eustachian catheter is of almost miraculous benefit. Rarely in any disease is any one procedure of so much benefit as is this little instrument in the tormenting *tinnitus aurium.* It seems perfectly wonderful that so much good can be accomplished and in so short a time. Nothing can be more satisfactory than to be able to rescue a patient nearly, if not quite, crazed by the everlasting roar of middle ear disease, occurring day and night, producing insomnia and a whole train of distressing nervous phenomena that is perfectly maddening. If the pathology of this disease was better understood generally and proper remedial agents applied, we would hear less about nervous deafness.

At the risk of being over particular in detail in a paper covering so much area that scarcely more than suggestions can be offered in the time afforded, I will attempt to describe the method of using the catheter, which presupposes that the nasal passages are fairly free from mucous membrane swellings and exostases, or deviation of the vomer. The instruments necessary are the ordinary pure silver catheter, about three millimeters in thickness. This is fairly flexible and can be bent to accommodate many disorted nasal chambers; and it is non-yielding, sufficient for the operator to feel sure of location of point and detecting the mouth of the tube. The small, hard rubber instrument recommended by some authors cannot possibly be of use to any except their own advocates. Now, sitting directly in front of the patient, connecting the ear canal upon the side to be operated upon to the corresponding canal of the operator with the diagnostic tube, one will introduce the catheter into the anterior *naris*, point down, and rapidly pass the instrument along the floor of the nose till it brings up against the posterior wall of the pharynx. Of course the patient is instructed not to screw up the face, but to think of other things and to look about the room. This much accomplished, all motions should be made deliberately and persistently; and right here one must use judgment in the management of the patient. Many will act badly and go away displeased under poor superintendence. They should be told that the tube gives an unnatural sensation, but no hurt would follow, or attend its use, and after that the operator's conduct shall be that of a person who had spoken truly and with confidence. After sounding the full depth of the chamber, the catheter should be withdrawn in a horizontal direction about one inch and the point carefully turned outward, completing the arc of a fourth of a circle; now the point is gently held against the outer wall of the nasal cavity and close to its bottom and the instrument slowly pushed toward the pharynx again, and in the vast majority of the cases its point will be felt to engage in the mouth of the Eustachian tube, and then the air may be injected into the middle ear by the air bag, whose nozzle is spheroidal in shape but fairly fits the large end of the catheter. This should be repeated several times, and if properly done will be detected by the connection made with the operator's ear with the long rubber diagnostic tube. No one will regret the time spent in learning this little manoeuver when once the immense good that so often results from this elementary procedure is known.

In all these cases where the catheter is indicated, such treatment should nearly always be supplemented by throat treatment; and one of the best is spraying about once daily with a pretty strong solution of "iron" alum—the ordinary sulphate of iron and ammonium—in strength about seven or eight grains to the ounce of water. In all these cases strict attention must be given to the naso-pharyngeal space, and the Eustachian tube, and the cleanliness of the middle ear, knowing well that perfect drainage is the first requisite in getting a permanent cure.

Again, I have known such an ear to persist for years without making a decided change for the better, even when the patient was under the care of men who were eminent aurists. Very rarely will an ear, even with a perforated drum-head, refuse to get well of itself or with ordinary attention to cleanliness in the so-called serous acute diseases of the middle ear; but should the discharge tend to become chronic, good results will follow insufflation of boric acid and carefully clearing the ear with cotton, or the boric acid may be instilled into the ear dissolved in alcohol.

There is a class of young individuals whose treatment must be exclusively throat treatment—the bearers of so-called adenoids. These children with obstructed nasal passages can be truly said to have the symptom of a head cold all the time. We all know how in some way this condition produces poor cerebration, and makes one dull at thinking and acting mentally, and gives a sense of ill-at-ease all the time. There is a sense of fullness, if not of real pain, in front of face, nose, eyes, and forehead, which renders quick thought and mental activity impossible. Whether this occurs on account of the diseased condition interfering with the cerebral circulation, or whether it be due to some relationship between the pituitary body and the naso-pharyngeal space, as suggested and claimed by some, as may be instanced by Piersol and Dr. James E. Newcomb, of New York, is a question upon which I do not care to enter, this being a subject for the specialist

alone to pass upon. This I do know, that this condition does exist. More than this, the air enters through the mouth and gains entrance to the larynx and trachea without taking up moisture, laden many times with a large amount of dust, and always containing some impurities that the nasal chamber would filter out, did the air pass through these cavities. Thus there are coughs, laryngeal, tracheal, and bronchial, due to the irritation incident to a dried mucous membrane, besides a possible host of reflex respiratory neuroses, among which may be mentioned spasmodic croup and asthma. The voice is always changed and often is dry, husky and toneless. The best means of diagnosticating adenoid disease is the introduction of the finger. Posterior rhinoscopy cannot be practised upon small children; but if the finger passed into this space discovers tissues in the vault beside the ordinary mucous membrane covering the bony arch, then something is there that is pathological and should be removed. The treatment of the various conditions will be somewhat indicated in a few cases I desire to report.

Case I.—Hosiery manufacturer, aged 52; catarrh of throat, long standing; bad hearing of voice, and gives attention to speaker's lips; hears speaking in public places badly—tinnitus aurium; heard with r. e. watch four inches, i. e. or pressure. After attention for three weeks at intervals of five to seven days with sprays and catheter, hears whisper and lowest voice at five feet, either ear and eyes closed; ringing stopped.

Case II.—Student, male, aged 19; chronic discharge from ear since small child; new fetid pus and serum come freely from ear constantly; M. T. gone, and ear-drum filled with granulations. This case has been under treatment of various men for a long time with varying results, and has had as good treatment as could be obtained. My own results were indifferent for a long time, till I used boriac acid in diluted alcohol. This stopped discharge and the granulation which I previously curretted, and the drum cavity soon became pale in color, leaving a minimum discharge and no odor. The hearing was irreparably lost to a great degree. This ear will never be very useful, but in time, with this treatment and proper attention to nasal pharynx, there will probably be very little trouble.

Case III.—Girl, aged 6; oral respiration since four years of age; eternally catching cold on slight exposure. Hearing very much obtunded; child stupid, watery eyes and much discharge from nose; snores badly and sleep disturbed. Inspection of membrane tympani shows abundant evidence of middle ear disease. Digital examination of posterior nares shows that the space is well-filled with granulations; child etherized and adenoid thoroughly removed. Improvement was observable in respiration immediately, and in two months' time the hearing was normal and nasal respiration was regained. Child lost peculiar face expression, and became bright and active mentally.

Case IV.—Child 9 years old; nasal discharge, consisting at times of greenish pus, and mucus and water, since a small infant; general condition poor and anaemic; no respiration through nose possible. Child lost natural physiogomy and looks as an imbecile; mouth rounded, poor sleep, loud snoring; child makes very little progress in school; hears nothing of class recitations or instructions from teacher; watches speaker closely in conversation and hears only loud talk close to ears and has general stupid look and behavior. Drum-heads badly inflamed and thickened. Naso-pharyngeal space completely filled with glandular hypertrophy. This child was thoroughly etherized, and the pharynx and posterior nares were thoroughly scraped away with finger nail and curette until passages were clear and respiration through the nose upon either side was well established. Hemorrhage was fairly abundant, but there was no particular shock, and at evening the child was sleeping and breathing much of the time through the nose. Improvement was decided from the first, and in a week the child could hear ordinary conversation half way across the room, and in six months she had normal hearing, and is to-day a bright-appearing, healthy and intelligent looking child, with no nasal or ear disease.

This was an exaggerated case, and the rescuing of this one child from a deplorable condition to one of health well repaid me for a great deal of labor.

INTESTINAL OBSTRUCTION, WITH REPORT OF FIVE CASES.

By Le Roy Newton, M.D., Walpole, N. H.

I SHALL not attempt, in this short paper, to review the whole subject of intestinal obstruction, but rather to briefly touch upon the causes acting separately, or in conjunction with each other, to produce this most common and distressing condition. That a considerable number of monographs have been presented to the profession in the past year, is evidence enough that intestinal obstruction is quite common, and, in a certain proportion of cases, is very serious. Indeed, I believe that every case of obstruction of the bowels, whether acute or chronic, is serious, and should never be considered trivial until the obstruction is removed. In very many cases, obstruction is so slow and insidious that the physician is rarely consulted until the symptoms are alarming, and we are called upon very often to confront, without an hour's warning, a condition so grave as to call for the most skillful and energetic measures to relieve the suffering, and save the patient. It is not my object to advance any new theories regarding the etiology or the pathology, or even the symptoms of intestinal obstruction, for it seems to me that this ground has been so completely covered by the most excellent essay of Treves, that it would seem presumptuous for me to attempt it.

To bring this subject before the reader in the simplest way, I shall use that form of classification which in my mind is best suited to the purpose—simply acute and chronic.

The causes leading to acute intestinal obstruction are:

1. Intussusception.
2. Strangulation, internal and external.
3. Volvulus.
4. Gall stones.

And to chronic (though the symptoms may develop acutely):

1. Unnatural accumulations (as fecal matter or foreign bodies).

2. Tumors, internal and external.

3. Stricture.

The symptoms of acute intestinal obstruction, from whatever cause, are usually characteristic, and from them a diagnosis is generally easy.

First, we have pain.

This symptom appears suddenly, and is at first paroxysmal, but later becoming continuous.

Next is the constipation. Sometimes we are able to get a pretty good movement of the bowels by enema, especially if the obstruction is high up, and the lower bowel full. Many of these patients are subjects of chronic constipation, with lowered vitality, predisposing them to many diseases, especially to auto-intoxication, due to the unnatural accumulation and retention of waste material. The third and important symptom is the persistent vomiting. First, the contents of the stomach, generally bile-stained and later stercoraceous; then comes on abdominal distension, with tympanites, and, finally, collapse with its attending phenomena, the feeble pulse, pinched features, and cold extremities, making a picture so complete in all its details as to deceive no one. There is in these cases a peculiar odor to the breath, quite characteristic, due to the absorption of gases by the blood vessels of the intestines and exhaled by the lungs. The urine is highly colored and of high specific gravity, containing a large amount of solids, especially the urates.

Usually in obstruction of the small intestine the test for indican will reveal that substance in the urine. The test is very simple, and is made as follows: Mix equal parts of urine and fresh nitro-hydrochloric acid, and add drop by drop a fresh concentrated solution of chloride of lime, and the appearance of an indigo blue color shows that indican is present. If the obstruction is in the large bowel, indican will not respond to the test.

The symptoms of chronic obstruction, of course, develop more slowly and insidiously, seldom causing any alarm until obstruction is absolute, and acute symptoms intervene. I believe I can best illustrate the symptoms of this condition, by reporting several cases I have met with in my practice.

Case I.—Mrs. B, age 74, rather a hard working woman. Had always enjoyed good health up to within a few weeks previous to present trouble. Was called Aug. 15th, and found patient with temperature of 101 degrees, pulse 100, and respiration 22. Complained of slight nausea, and some abdominal pain. Tongue was coated brown, and breath revealed a condition of auto-toxaemia. No movement of bowels for two days.

Examination: Abdomen was symmetrically distended and tympanitic, peristalsis could be seen. Palpation revealed a doughy tumor in the line of the colon and in the right iliac fossa. There was some slight tenderness over caecum.

The history of constipation for several weeks past becoming absolute two days before my visit, together with the presence of a doughy accumulation in the colon, made me suspect obstruction, and I ordered enemas of warm soap and water every two hours, the first containing a half ounce of turpentine. I left some tablets containing strychnine arseniate, gr. 1-100 and hyoscyamine, gr. 1-200, to be given every hour. Six hours later I called and found patient more comfortable. The first enema had relieved much of the distention and a small amount of fecal matter, second enema some fecal matter, and the third very little more than the water. I then gave her an enema through the long 30-inch rectal tube, and as a result a large amount of hard scybalous masses came away twenty minutes later. By this time the patient complained of considerable pain, and as she was very weak and exhausted I gave her a hypodermic of codeine, gr. 1-4.

She slept most of the night, but began vomiting about five o'clock the next morning. I informed the family fully of the gravity of the case, and that an examination through the abdomen might be necessary, and should not be delayed beyond a few hours if patient was not relieved by that time. I then began using the rectal tube every two hours. Hips were elevated on two pillows, and the patient was directed to retain the enema as long as possible. Twice I gave a pint of warm olive oil through the tube; the other enemas were simply soap and water. The result was that with every enema (and ten were given) there was evacuated as much as a full normal movement, and inside of twenty-four hours the temperature and pulse were normal. No nausea, and the patient was about the house the 19th.

Case II.—Merriam L., age 7 years. Pale, delicate-child; has never enjoyed good health. Glands of neck enlarged, and subject to attacks of tonsilitis. I was called on the morning of November 4, 1897, and found her suffering from phlegmonous tonsilitis. Temperature 103 degrees, pulse 160, respiration 36. Complained of headache, backache, and slight pain in abdomen, located at umbilicus. Urine was high-colored and loaded with urates. The mother said bowels had moved the day before. Examination of abdomen revealed some distention from gas, general tenderness, and quite sensitive to deep pressure at umbilicus. I prescribed an antiseptic spray for the throat, left a solution of aconite and belladonna for the fever, and some calomel tablets, gr. 1-10, to be given every half hour until a grain was given. In the evening I called and found tonsil very much swollen and soft, and it opened upon slight pressure, discharging quite freely, and in an hour she appeared much better.

The bowels had not moved, and I directed a soap and water enema. Several small, hard masses came away with the enema, and she complained of considerable pain. This subsided under hot applications, and she passed a fairly comfortable night until about one o'clock, when she again complained of severe pain at umbilicus, and I was called.

I had a hot poultice applied, and directed the nurse to give another enema. Simply the water came away, and then I gave a pint of warm olive oil through the rectal tube, which brought away what I thought was a particle of hardened faces. Upon examining this more closely it appeared so unlike anything I had ever seen before that I had it cleansed. It was white in color, and about the consistency of "suet," was oblong, one inch in length by three-eighths inch wide, and half an inch

thick. One side of this body was covered with mucous membrane (as I proved later by the microscope), the other side was worn quite smooth, evidently made so by the passage of fæces for probably a long time. Very soon after this she began vomiting, and I told the parents I believed the condition to be grave, and asked for council. Dr. W. H. Pierce, of Greenfield, Mass., was called and arrived at midnight, and after a very careful examination advised a celiotomy as giving the only possible relief. As the symptoms soon called for immediate interference, we decided to operate at once. Every effort was made to render the operation aseptic, and an incision was made in the median line. Peritoneum showed evidence of *acute* inflammation, together with the characteristic nodules of tubercular infiltration. Intestines were quite dark, and about a foot above the coecum there was an obstruction. This showed quite clearly through the intestinal wall, and appeared very much like the mass I recovered from the enema. Very little pressure loosened this, and the gas escaped to the collapsed intestine beyond. Irrigation with hot normal salt solution for about ten minutes restored the darkened bowel to almost its natural color, and brought away many particles of flocculent and partially organized lymph, showing that there was a diffuse acute inflammation. Patient rallied from the operation, and for four hours seemed quite bright. Then she began to fail; pulse rapid and thready. Vomiting set in, and twelve hours after operation she died.

I have no doubt, nor had Dr. Pierce, that this was a case of tuberculous peritonitis, and that the masses that acted as obstructions were tuberculous infiltrations of the membrane of the bowel into cheesy degeneration.

Case III.—J. S., man, age 42. Has always enjoyed excellent health, with the exception of occasional attacks of sick headache and constipation.

Was called to see him March 20, 1897, at midnight. When I arrived patient was having a chill. Had been suffering from intense paroxysmal pain in the abdomen for two or three hours. Had vomited three times; the last was dark-colored. Bowels had not moved for two days, but he had been feeling as well as usual until this attack came on, three hours before my visit.

Examination of abdomen showed general distention, with tympanites. Very tender, especially in the region of the coecum. I ordered an enema of soap and water containing a half ounce of turpentine. This was retained ten minutes, and brought away a large amount of gas and a few hard fecal lumps. I was then obliged to give the patient a ¼ gr. of morphine hypodermically, and apply a hot poultice to the abdomen to relieve the severe colic.

The next morning I learned that the patient had slept about six hours, but still had some pain, and bowels had not moved voluntarily. I then gave him a pint of warm olive oil through the long rectal tube, patient in the knee-chest position. This he retained twenty minutes, and the result was a large, natural movement. Something hard was heard to strike the bottom of the vessel and upon examination a large prune stone was discovered. Patient did not remember swallowing it, but said he had eaten prunes twice in the last week. He was at work the next day as well as ever.

Case IV.—Mrs. K., age 34. Housekeeper. Has suffered from "bilious attacks" and constipation for two or three years, otherwise has enjoyed good health. During these attacks has always suffered from pain in right side just below liver.

I was called December 18, 1897, and found patient suffering intense colic, requiring morphine hypodermically to afford relief. Pain was paroxysmal; was confined to the right side just below the liver. There was very little tenderness, some tympanites. Patient was vomiting bile-stained mucus, with paroxysms of pain. Conjunctiva and skin very yellow. Urine very dark. There had been a small, light-colored stool the day before I was called. Temperature was 101 degrees, pulse 120.

From the symptoms of intense paroxysmal pain in the region of the liver, yellow skin and conjunctiva, the vomiting of bile-stained mucus, sudden onset and history of previous attacks, I thought I was dealing with an attack of hepatic colic. I directed hot applications over seat of pain, and gave a hypodermic of morphine, gr. ¼, and atropine, gr. 1-150, and patient was relieved for four or five hours.

Next morning I found her quite comfortable, but the stomach rejected everything but sips of very hot water. Bowels had not moved. I directed a warm soap and water enema, and as the result, a small amount of hard, light-colored lumps were passed. There was, at this time, no pain, but slight tenderness in right hypochondrium on deep pressure. I left tablets of calomel, gr. 1-5; ipecac, gr. 1-8, and soda, gr. 1, to be given every half hour, to be followed by a tablespoonful of Carlsbad salt in hot water in four hours. Called in the next morning (20th); no action of the bowels. Salts were rejected by the stomach half hour after taking. I gave her a pint of warm olive oil through the rectal tube, patient in knee-chest position. Oil was retained thirty minutes, and came away clear, with no particles of fæces. By this time it was evident to me that I had to deal with a case of intestinal obstruction with very little hope of relief with ordinary measures, and I advised celiotomy. The family objected to operation, and I asked for council.

Dr. Willard H. Pierce, of Greenfield, Mass., was called, and he came the next forenoon (21st). He confirmed my diagnosis of obstruction and advised operation if relief was not obtained in a few hours. High enemas were given every two hours, together with small doses of calomel. I called early the next morning and found patient had passed a restless night, only sleeping a few minutes at a time. Had begun vomiting a little past midnight, the vomit becoming fecal about 6 A. M. I told the husband that there was undoubtedly absolute obstruction of the bowel and the only hope left of recovery was an operation. Operation was then decided upon, and I telephoned Dr. Pierce and a nurse, and made preparations for immediate celiatomy. Examination under ether showed dullness above cecum with tympanites over the rest of the abdomen. Incision was made over cecum and revealed first a mass of collapsed intestine, which accounted for the dullness on percussion in this region. On examination of this mass of collapsed bowel, many bands of adhesions

were encountered and cut, and then the real obstruction was found. This was a strangulation of the ileum by Meckel's diverticulum. A loop of small bowel was found about sixteen inches in length, tightly encircled by the diverticulum. So tightly was this constricted that the bowel could not be released until the band was tied off and cut, when immediately the collapsed bowel filled with the gas that was confined above. Intestines were very dark and congested, and were treated for ten minutes with irrigation of hot normal salt solution, when they returned to almost their natural color. Condition of patient after the operation was excellent, and recovery was uneventful and progressive.

I saw the patient last month (April), four months after operation, and she said she was enjoying better health than she had for two years.

Case V.—Mrs. H., age 62. Housekeeper. Mother of a large family, and has always been a hard worker. Has not enjoyed very good health for two years. Six or seven months previous to illness began to complain of pain in abdomen with constipation. A homeopathic physician was called, who treated her until about April 1, when, not finding relief, she went to Keene to visit her daughter and put herself under the care of Dr. J. B. Hyland of that place. Dr. Hyland made a diagnosis of stenosis of the bowel, and explained to the family the gravity of the case. At that time, Dr. Hyland tells me, that the bowels could only be made to move by enemas, and even then the result was very unsatisfactory; only three or four pieces about one inch in length and the diameter of a lead pencil at each evacuation.

She stayed in Keene until April 16, when she returned to Walpole, showing some improvement, but still quite weak and nervous, and I was asked to meet Dr. Hyland in consultation. At that time abdomen was enormously distended and tympanitic, but not tender. Coils of distended bowel could be plainly seen through the thin abdominal wall, and waves of peristalsis could be observed almost as plainly as though the intestines were bare before the eyes. The transverse colon was displaced and sagged almost into the pelvis. Patient was quite nervous. Complained of an intense burning in the esophagus, usually an hour after supper, and lasting for an hour or so, but which was relieved by a ten-grain powder of bismuth sub-nitrate. Occasionally a little flatus was passed, but not enough to relieve the distention.

Treatment consisted of faradization of the abdomen, with massage, a mild laxative three times a day, and a soap and water enema once a day. Diet was liquid or semi-liquid. At night it was necessary to administer a small powder of sulfonal, which usually assured her a good night's rest. She was encouraged to walk about the house, and when the weather permitted to go outside. Under this treatment she seemed to improve a little, until the night of the 2d, when I was summoned hastily by telephone at midnight.

Patient was vomiting, and complained of pain in right side of abdomen. Everything tried by the mouth was rejected, and hot applications failing, I gave her a hypodermic of morphine, gr. 1-8, with atropine, gr. 1-150, which relieved her until morning, when she began vomiting again, this time the contents of the bowel. I asked that Dr. Hyland be summoned, and he came at once. Celiotomy was discussed, but not deemed advisable under the circumstances. Patient was in a state of collapse, and so weak and emaciated from long suffering that I am certain operation would only have hastened the end, which came the 5th.

At the autopsy I found many bands of adhesion binding the transverse colon to the other intestines almost in the pelvis. Intestines were enormously distended, and at the junction of the descending colon with the sigmoid flexure was the stenosis. This was a narrowing of the lumen of the bowel by dense fibrous tissue. The opening at this place was not large enough to admit the little finger, while the bowels above and below were about two and a half inches in diameter. I removed the section containing the stenosis, and sent it to a pathologist, but up to this writing I have not received his report. I believe the stenosis to be caused by the contraction of a healed ulcer.

In conclusion, I will say the cases I have reported are not unusual ones nor peculiar in any respect. They are like the cases we all come in contact with quite often, and for that reason a word of advice may be appropriate.

Never look upon a case of intestinal obstruction as trivial. The simplest case is worthy of your very best effort. The mortality of acute obstruction is high and that should be warning enough to put us on our guard. Watch every case closely, and do not be afraid to ask for counsel before it is too late.

Try the milder methods first to relieve the obstruction, but do not delay operation if there is a shadow of a chance to save the patient. After you are once convinced that there is absolute obstruction, remember that every hour increases the danger, and every attack of vomiting after this stage is reached, adds to the gravity of the case. Do not use cathartics unless you want to see a certain proportion of these cases perish that might be saved. The syringe and the long rectal tube are safe and more often successful than any other one method. In some cases mild laxatives may be used, but not abused. Be *cautious* about using opium in these cases. In some cases it is necessary, nay, imperative, but as a routine it is vicious, for it masks the symptoms and quiets the physician's fears, as it soothes the patient's pain, the acute symptoms usually returning as the effects of the opiate wear off.

THE METHODS OF PEDIATRIC INVESTIGATION.

By M. Fitch, M.D., Philadelphia, Pa.

IN taking up the history of pediatric cases, it is essential that the investigator should begin with the *heredity* of the child. The remark of the late Dr. Oliver Wendell Holmes, that a child's life and characteristics are begun a hundred years before his birth, is a striking statement of a truth of the greatest importance. Next in order comes the *pre-natal history*, which is the history of the mother while carrying the child. The importance of the maternal condition on that of the child, is very close and very serious.

Then comes *the general history* of the child: In the first place, under what general conditions does it live? Has it been able to enjoy in plenty the benefits of good living, or has it been deprived of many important things through dire necessity. These inquiries are all outside of the investigation into actual disease. Lastly, when the child is brought to our attention, we must take up the question of the *recent* history, or the story which the people tell us about the child's disease. This may be nothing but a mass of superstition on the part of the mother, yet the part of the physician is to receive all that is told him in kindness. Their observations are as valuable in the field of medicine as yours would be in mineralogy or something you knew nothing about, yet they do frequently hit upon some things of importance to you.

In studying the child's general history you ask the mother, for instance, how the child has been fed. then ask about the dentition, when and how the teeth came. Then the question as to the ocurrence of infectious disorders.

The second way to study the child is by observation; and this is the crucial and important test—the physician's ability to observe closely. Take in as rapidly as possible everything about it. Physicians who are studious will remember their patients' faces much longer than they do their names.

Observe the *color* of the child. If naturally dark, whether the color is normal for a dark person, whether it is a dark darkey. It is the relative color that is of importance. Then we observe their *posture*; and this is of great importance. But you will say that the child is fastened down by its clothing and not free to assume an independent posture. Then you must put them so that they are free. We also notice the *expression*. Although all babies are said to look alike, yet the expression is indicative of the condition of the nerve centers. Then observe the *nutrition* of the child, whether the flesh has the proper firmness or hardness. Then while all this is going on notice the respiration; as yet do not touch the child at all.

Then we proceed to the further examination. Here the child is handled differently from an adult. When you come to examine the child you must remember you are examining the darling of the mother. She imagines that to expose any part of its body is submitting it to danger. If you go at this without tact, the mother will object to you and your methods.

When you examine, first see that the child is in as comfortable a position as possible. Then begin at the part most accessible to you, the head and face, and proceed in the natural order. When we investigate the pharynx, nose, larynx and ears, we must sometimes have instrumental assistance. It will be very important to have a great deal of light; formerly the examination of the throat and larynx was rough and barbarous. By simple palpation over the throat we gain many valuable points about the interior. When we do attempt to make an internal examination, if we make gentle pressure on the child's chin the mouth will usually open. Always take with you the head mirror. It will be needed whether you are a specialist or not. You can use the handle of a spoon to depress the child's tongue, and if it worries move it to the side of the mouth.

The examination of the larynx may be left to the specialist. In examining the ears, let me warn you to keep things out of the ears, but look in and examine the discharge.

When you come to the thorax it should be entirely devoid of clothing; then the chest may be taken between your two hands, the anterior one over the heart; and if there is serious pulmonary affection there will be a distinct increased vocal fremitus, and if the action of the heart is increased you can distinguish it at once. You can also notice the respiratory movements. When you are listening to the child's chest the ear can be put directly on the back between the scapulæ, and then in front. The abdomen is examined by palpation, and the limbs are observed, handling and testing them in various ways. Then comes the question of measuring the proportions of different parts of the body.

Now this would embrace a rather superficial examination of the child. In these days to make it complete we should subject the blood, secretions and excretions to chemical and bacteriological tests.

In proceeding to examine, then, you should have the child in as comfortable a position as possible, warm and clean your own hands and examine first the part most accessible; examine the chest between the hands, the abdomen by palpating, have the blood and secretions and excretions tested, and call in the aid of all the specialists. And when you have done all with your science, some old woman will tell you there is a pin sticking in the child.

First, in a typical child the head, as you see, has the natural division into face and cranium. The cranium may be greatly modified by pre-natal disease. In external cases of intra-uterine rhachitis, the face is small and weazened and out of all proportion to the large overhanging cranium. The fontanelles and sutures should be studied. In some diseases the fontanelles are early closed, notably in rhachitis. The anterior fontanelle may be closed. The contour of this head is not especially abnormal in any way.

The face is divided into three zones, the upper, middle, and lower zones. The upper zone gives us important information of the cerebro-spinal axis. In beginning brain disease the upper zone is impaired. The middle zone, including the nose, teaches us the condition of the respiratory passages; for instance, the nostrils are distended in dyspnoea, in diphtheria the secretion is abnormal, etc. The lower zone is indicative especially of the digestive tract. The tongue shows the condition of the bowels.

Coming now to the integrement, there may be a little eczematous tendency. You can remember that the body is made of an epithelial lining turned inside out. The epithelium of the skin and bowels are from the same layer. It is well to observe them that eczema is not a disease, but a condition. It is a congenital peculiarity of the smaller nerves of the bowel and skin, because they are virtually the same. In this case it is simply a tendency, and not pronounced.

In noticing the respiration, we frequently find a baby breathes with a grunt. Now this does not necessarily indicate disease in children; their lungs are not developed as those of an adult and bronchial

breathing is normal. A healthy baby will grunt. There is no play of the nostrils normally. The position should be indicative of freedom from pain.

We should proceed to palpate the two zones, first the posterior auricular, and then the anterior. Behind the sterno-mastoid there are some enlarged lymphatics, one especially on the right side. Coming to the anterior we palpate, carrying our fingers deep toward the trachea.

The child seems to have a desire to swallow whatever it holds in its hands. What would you do if it did swallow something? There is one thing that you must not do, and that is to give purgatives. Feed it for twenty-four or thirty-six hours on a diet of perfectly soft food, such as mashed potato, that will embed the foreign body, and then break up the condition afterwards with oils.

Now let us see whether we can investigate the thorax. The vocal fremitus and the heart beat is perfectly natural. You should pay attention to the contour of the chest. There should be no malformation of the sternum. The child has quite frequently a protuberant abdomen, and you may think it an indication of disease; but it is not, it is perfectly natural. Why is it large? In the first place because every baby has a big liver. The liver is the bank with which nature sends it into the world, full of nutritious substance. The bowels of a little child are not necessarily tympanitic.

In looking at the limbs we find them fairly well nourished. The position is natural. You must remember that the feet of a child recall strongly its history of evolution. They are strongly prehensile when the child is first born. If any little new born child be placed on its back and a stick held above it will naturally grasp the stick with its feet.

The cranial measurement is forty-five centimeters; the chest is between two and three centimeters less than the head circumference. The length is practically sixty-six. The child should have practically the proportions which do not indicate any disease. In the hydrocephalic child the cranium is enormously increased. In microcephalous, the measurement drops much below that of the chest.

These three are the simple methods of investigation. In conclusion, I wish to make one remark. Remember always that the child is to be investigated from the standpoint of what it really is, and not from the standpoint of what some one thinks it to be. Remember that all superstitious treatment and all quack practice thrives on the idea that disease is an entity in itself, that what is in the child is an entity, a sort of demon, that there is some specific remedy for it, and if you can find that specific you can drive out the demon. What in reality ails the child is simply a *condition* of the body.

SIMPLIFIED METHODS OF BLOOD EXAMINATION.*

By Alfred C. Croftan, M.D., Pasadena, Cal.
Late Assistant Professor of General Diagnosis, College of Physicians and Surgeons, Chicago.

A good microscope, a few cover slips and slides, a bottle of Ehrlich stain, on the one hand, a general knowledge of the morphology of the normal blood corpuscles and a memorized appreciation of the changes they present in different diseases, on the other hand, constitute our working material.

Information sufficiently accurate for diagnosis can be obtained in this direction from a single glance at the colored blood-slide. The same, though not quite so radically, may be said of the determination of the hemoglobin; the percentile measurement of this constituent of the blood is a simple procedure with the aid of Gower's or Fleischl's apparatus; but it is not necessary, and in my experience again a careful and appreciative study of the blood-slide will give information that suffices for diagnostic purposes.

Under ordinary aseptic precautions the ear-lobule of the patient is pricked with a clean needle, the droplet of blood that oozes out (no pressure should be exerted) is spread in a thin layer between two cover slips and allowed to dry in the air; in order to fix the blood on the slide and to prevent its being washed off in the subsequent manipulations, the slips are wrapped in paper and placed into a little copper box (usually called a blood oven) and heated to 110 C.—or they can be placed in a mixture of equal parts of alcohol and ether for twenty-four hours. A few drops of Ehrlich's triple stain are placed upon the cover slip and allowed to remain for about two minutes, then washed off with water, the slips dried between filter paper and mounted on a slide with a drop of Canada balsam. The slide is now ready for examination.

There are three kinds of corpuscles in the blood, the red (erthrocyte), the white (leucocyte), and the blood-plaque. The latter plays no role in diagnosis, so we describe the former two alone.

The normal red-blood corpuscles present themselves as round discoid elements with a central depression. They are arranged in rolls, have no nucleus, are uniform in size and shape, and their hemoglobin (with Ehrlich stain) is colored reddish-yellow, and forms a concentric ring around the central depression. Pathologically, five abnormalities must be observed: 1, they can be reduced in number; 2, they may have a nucleus; 3, they may present differences in size; 4, they may present differences in shape; 5, the hemoglobin of the individual cell may be reduced. All these abnormalities can be determined by a glance at the blood-slide; reduction in number by the fact that the blood corpuscles are not, or only in part, arranged in rolls, and appear as individuals; the presence of nucleus by the appearance of a blue circumscribed body within the cell; changes in size and shape are apparent, and the reduction of the hemoglobin may be determined sufficiently accurately for diagnostic purposes by a narrowing of the concentric red ring described above.

The characteristic features of the normal white cell or leucocyte are that it is larger than the red-blood corpuscle, has one or several nuclei, and a protoplasmatic content whch may be homogeneous or have fine or coarse granulations. The nuclei are stained blue, the homogeneous protoplasm pink, the fine granulations violet, and the coarse ones bright red. A leucocyte with the bright red coarse granulations is called "an eosinophile cell."

The abnormalities observed are chiefly numerical, *i. e.*, an increase relatively of all or a part of the different kinds of leucocytes. An increase of leucocytes is called "a leucocytosis;" if the leucocytes with several nuclei are increased, we speak of a "polynuclear leucocytosis." A simple method of determining whether a leucocytosis exists—one that does away with the tedious counting and is all-sufficient for diagnostic purposes—is the following: Normally, one leucocyte should be found on an average in every fifth field; when we find two or three in every five fields we speak of a slight leucocytosis, while one leucocyte to every field and more constitutes a severe leucocytosis. Many observations have been chronicled on the different forms of leucocytosis, but their diagnostic significance is doubtful. It is, for the present, sufficient to verify that an increase of leucocytes obtains; especial attention should be given to the absence, presence or increase of the above mentioned eosinophile cells.

A knowledge, appreciation and understanding of the above facts constitute our sole working material.

If we examine the blood and urine of a pneumonia patient daily, from the fifth day on, and find eosinophile cells in the blood and chlorides in the urine, we may predict with absolute certainty a favorable crisis within twelve to eighteen hours.

* Exchange.

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A soul grows young as the body grows old. There is no such thing as age to the immortal part of us. The muscles and nerves become weary and need the rest which change, the change of death, brings, but the spirit just crosses the threshold of conscious and healthy life when signs of physical decay make their appearance. Give him a new body and he will show that his sojourn or bivouac here has been only an apprenticeship, and that when death gives him his freedom and another world furnishes him his opportunity, he will be a nobler creature than his present circumstances have allowed him to become.—HEPWORTH.

A STEP INTO THE INVISIBLE WORLD.

THE signal office of the War Department at Washington is engaged in conducting a series of experiments upon the Marconi system of wireless telegraphy, with the intent, if it proves as satisfactory as it has done in England, of introducing it into the army and navy. The system is based upon the utilization of the Hertzian magnetic waves which travel through the luminiferous ether with the velocity of light, and, in fact, were declared by their discoverer, Professor Hertz, of Carlsruhe, to be identical with light, except that the waves are of greater length. Whenever an electric spark is made to jump from one electrode to another these waves are produced, and their rapidity may be varied by variations in the spark-producing apparatus, so that instruments used for sending and receiving signals through their medium can be attuned to one another and made invulnerable to the attacks of other waves of dissimilar periods. Wherever these magnetic waves reach they affect all magnetic material, and thus make it possible to use them as a means of carrying messages.

It was also discovered that the Hertz waves, although radiated like light in all directions, if set into motion from a free source, can be reflected and directed, just as light is, by means of mirrors. If, therefore, you imagine an electric circuit in a house, with a key in it, just like an ordinary Morse telegraph circuit, you have the basis of Mr. Marconi's system. This circuit runs through a spark coil with an oscillator or interrupter, to produce continuous sparking so long as the circuit is kept closed by the key, and from this the secondary or sparking wire runs out of doors and to the pole from which the messages are to be sent. The two ends of the wire terminate in small metal spheres, between which the sparks pass.

One of the wires is extended to the earth and the other has an extension carried vertically into the air, and the length of the latter wire bears a distinct relationship to the distance over which the signals can be sent. It has been shown, by actual test, that with parity of other conditions, a vertical wire twenty feet long is sufficient for communicating one mile, forty feet for four miles, eighty feet for sixteen miles, and so on. At a station in England at the present time an installation is working over a distance of eighteen miles, with a vertical wire of eighty feet at each station. The current used is from six to nine amperes at fourteen volts, and the spark made is regulated to one centimeter in length.

Marconi's receiving instrument is what is known as a coherer, and consists of a small glass tube four centimeters long, partly filled with filings of nickel and silver.

At either end of this tube and reaching into the mass of filings is a terminal wire of an ordinary Morse relay magnet circuit. One wire runs to the ground and the other connects with the magnet, the battery and the ground. The armature of the relay magnet opens and closes a strong local circuit, which in turn operates a recording instrument, and also a little hammer which continually taps the coherer to shake the filings apart when they are not being held by magnetic attraction. The coherer is set up on a pole side by side with the sparking spheres, with a similar vertical conductor. The Hertzian waves have the quality of a magnet in causing the filings in the tube to adhere to one another, and the manner of the operation of the system is simple.

The operator presses his key, just as in ordinary telegraphing, making his alphabet in dots and dashes. As the waves shoot out and with the velocity of light reach the receiving station miles away, the filings in the coherer there draw together, and a current passes through them which draws up the armature of the relay mag-

net. This closes the circuit of the recording instrument, and although the tapper is set to work to shake the filings apart, the magnetic waves come to it with such rapidity, each one re-establishing the coherence, that the slower acting recording instrument is not disturbed, and it continues to record the signal so long as the far-away operator keeps his finger on the key. The tuning of the coherer to waves of different frequencies is done by attaching to each end of it a copper strip, and the length of these strips determines their susceptibility to different wave tones, just as the length of an organ pipe fixes its tone.

THE SECRET OF OLD AGE.

THE unfolding of the secret of a happy, useful life, and a green old age, commences in babyhood, and follows on, step by step, along well defined, harmonious lines until it passes through the gateway of death and is resurrected, as we believe, in the eternal youth of an immortal existence. John Ruskin, in answer to the question: "When does the education of a child commence?" replied: "At six months old it can answer smile with smile and impatience with impatience. It can observe, enjoy and suffer acutely, and in a measure intelligently. Do you suppose it makes no difference to it that the order of the house is perfect and quiet, the faces of its father and mother full of peace, their soft voices familiar to the ear, and even those of strangers loving, or that it is tossed from arm to arm among hard or reckless or vain minded persons in the gloom of a vicious crowd or the confusion of a gay one?"

If parents could realize how much of the prosperity, the happiness, the strength of character of the whole future life depends upon the education, mental and physical, in those days of infancy and childhood, when the home and its influence for harmony or discord, for strength or disease, is all powerful, how many human wrecks might be prevented and how much crime diminished. Given a good constitution, or even a weak constitution strengthened and developed by logical thought, in which the mind is taught to reason and act from its own observation of the laws of health, physical and mental, the secret of a long life is easy. Cheerfulness, plenty of work, moderate living and sleep, work and plenty of it, properly directed, do not wear out the brain cells and derange the functions of life anything like as much as the ceaseless worry of an ill regulated life, tossed about upon an uncertain sea without the strength and character of a harmonious mind, cool, calm and self reliant to guide and direct.

History is full of incidents illustrating the fact that tireless toilers in every department of statesmanship, literature and science, often live the longest and accomplish their greatest work after they have passed the meridian of life and their heads are frosted with age. Many of these octogenarians began life as delicate persons, but worked with a hopeful spirit and even in their darkest days never looked upon life as a burden, but to be used wisely, with careful thought and ample preparation to overcome every obstacle and every hindrance to the accomplishment of the best possible results. If every young man or woman would take seriously to heart the great truth that it is never work that kills, but only worry, life would be brighter for all.

A FRAUD.

SOME months since THE TIMES, in common with many other medical journals at home and abroad, published an abstract of an article which appeared in the February issue of the *Texas Courier-Record of Medicine*, by W. W. Winthrop, A.M., M.D., entitled "Singular Discovery of a New Florida Plant That Is an Antidote for Snake Poison, and the Cure for the Opium and Morphine Habit." The name of the plant, "Husa," whose potent power serves as an antidote to the venom of serpents, and also as a cure to the opium habit, Dr. Winthrop says, "is not only unclassified, but hitherto unknown to science. It is the most diffusable stimulant known, acting immediately. It is owing to these last two mentioned properties that it has been found to be so efficient a remedy for the opium habit. I have tested it beyond question, and in every case, without one single exception, it is found to be a perfect cure. It takes the place of opium or morphine. Supporting the patient fully, it is sedative but not narcotic. It produces slight elation, but no somnolent effect. To use the illustration of one physician who cured himself of the opium habit with it, a habit of twenty-three years' standing, and using forty grains sulph. morph. daily, 'It makes a man feel just as easy and comfortable as one feels after a satisfying meal.' As soon as I learned its properties I sent some of the Husa plant to several doctors I knew who used morphine; they one and all pronounced it 'a perfect success.' I have never known of a failure when the patient wanted to be cured. In the hands of a careful physician this remedy will be found efficient in the wrost cases of drug addition. * * * * With Husa

physicians can cure their patients addicted to the use of opium, morphine, etc., instead of letting them get into the hands of quacks.

"It has an acrid taste when chewed in a recent state. The tincture, according to its strength, is a diffusive stimulant, causing a gentle excitement to pervade the entire system, making one inclined to talk, laugh and 'have fun.' The active principle, husin, consists of white, very light flocculent, minute crystals which agglomerate into lumps when exposed to the air. It is poisonous as atropine or strychnine, one-fortieth of a grain causing violent beating of the heart, as though it would pump itself through the thorax."

The wonderful powers of this new discovery seemed to be so great as to call for not only a clear and reliable botanic description of the plant, but a careful analysis of its composition and a scientific test of the action. According to the best methods of drug proving, no one was better qualified for this work than Prof. John Uri Lloyd, of Cincinnati. Dr. Winthrop refused to send to anyone specimens of the plant, but to all who applied a tincture was furnished representing eight ounces of herbs to a pint of alcohol in ten vials, graded according to strength, being one month's treatment. With the medicine were printed directions, in which the statement was made, "Husa is not a narcotic."

Under the scientific manipulation of Professor Lloyd, Husa was found to be composed of morphine, approximately, 1.3 per cent.; salicylic acid, 16 per cent.; alcohol, 12 per cent.; glycerine, 10 per cent.; water and coloring matter, 75 per cent.

The amount of morphine in the ten vials was graded, the first being 2.19 per cent. of morphine and the last 1.33 per cent. The editorial notices of this concoction have been so extended that the maker of it has probably reaped a rich harvest. The thanks of the profession are certainly due to Professor Lloyd for the work he has performed.

GOVERNMENT SANITARIUM FOR CONSUMPTIVES.

SURGEON GENERAL WALTER WYMAN, of the marine service, has secured the authority from the President to take possession of an old abandoned military reservation, known as Fort Stanton, in Lincoln County, New Mexico, as a sanitarium for consumptive sailors. The reservation contains several thousand acres of splendid land on the eastern slope of the White Mountains, and about thirty stone buildings, which will be put in condition for the reception of patients by June. It is probably true that the best climate for consumptives is that of a moderately cool and dry atmosphere at a high altitude, without strong wind and great temperature changes, and the mid-continental region in New Mexico, Arizona, Western Texas and Southwestern Kansas possesses these advantages to a great degree. Gen. Wyman's idea is to conduct the Fort Stanton establishment as he would a ranch, the patients being more or less employed while under treatment. The sanitarium may in time become self-supporting if the patients are benefited according to his anticipation and the products of the ranch are profitable. Only marine hospital patients will be treated at first, but if the establishment is a success the scope of the resort will be broadened to take in other patients at a small expense, only sufficient to cover the actual cost of subsistence. At present there is no station under the control of the government which will in any way answer the necessary climatic requirements which Fort Stanton possesses. The experiment of the United States government at Fort Stanton, and of the State in the Adirondacks, may lead to most important results in the not distant future.

THE LATEST "MIRACLE OF SCIENCE."

IN *McClure's Magazine* for March, Mr. Charles Tripler, whose wonderful work in the production of liquid air in practically unlimited quantities has lately attracted so much attention, is represented to have said: "I have actually made about ten gallons of liquid air in my liquifier by the use of about three gallons in my engine. There is, therefore, a surplusage of seven gallons that has cost me nothing, and which I can use elsewhere for power." And in a second interview published in the *Evening Post*, March 28, he repeats this assertion even more positively. When asked whether the success of liquid air as a great revolutionizing agency in modern industry and life, depends upon the production of larger quantities by the use of any given quantity, he replied: "If I had not achieved the abolition of steam in the manufacture of liquid air, I should have accomplished nothing. That is, although liquid air might still be of use in some special applications, it could not become the supreme universal power-producer which I expect it to be." Yet in apparent contradiction of the first quoted statement, Mr. Tripler also declared: "I don't claim to create energy, to make something out of nothing, to upset any of the laws of nature." Now, one definition of "perpetual motion" is, "A machine which, according to the hopes of its inventors, after it has been once set in motion, will go on

doing useful work, without drawing on any external source of energy" (exactly what Mr. Tripler asserts his liquifier does). "Such a machine would entirely controvert the established principle of the conservation of energy." So far as any human judgment can foresee, it would overturn the present constitution of the cosmos, and substitute an anarchy. It was therefore a great relief to be informed by the *American Machinist* that Mr. Tripler's most trusted assistant was compelled to acknowledge, at a recent meeting of the Franklin Institute, that the portentous statement in question was untrue.

The late lamented Keely only claimed to have discovered and partly mastered a hitherto unknown natural force. He did not ask us to believe that he had succeeded, as it were, in lifting himself up by his own boot straps. The question, as a contemporary expresses it, is distinctly one of fact. If Mr. Tripler can do what he asserts, and convince the doubting Thomases that he has done it fairly, there will be no more cavilling, whatever the consequences involved. Failing in this, and still maintaining his pretensions, he must be content to figure in the same category with thaumaturgists like Cagliostro and the deceased Philadelphia projector.

THE FUTURE OF THE HUMAN ALIMENTARY CANAL.

IN an address on "Some Rudiments of Intestinal Surgery," delivered before the Midland Medical Society at Birmingham, Mr. Frederick Treves remarked as follows upon the possible future reversionary evolution of the human alimentary system:

"The actual body of man seems to have changed but little since his first appearance on the earth, but the environment of the man has changed in the meantime to an extent beyond all reasonable conception. Now it is a question if the alimentary canal has adapted itself to this latter change. It is a question if the human digestive organs have progressed with the times, and have advanced with that progress of events which has raised man from a clever brute to a cultured epicurean. It is a question, indeed, if our stomach and intestines are—to use a common expression—quite up to date, or are quite adapted to the enlightened individuals they serve.

"Without multiplying examples of apparent experiment and adaptation, one might be permitted to speculate as to the future form of the digestive canal of man. * * * It may be surmised that the coming man will be quite edentulous, that he will have a less enigmatical liver and no gall-bladder, and that his intestine will be considerably shortened, and, it is to be hoped, considerably simplified. Extreme refinement in the selection of food materials, and an exquisite cultivation of what is termed a 'palate,' may lead to an elongation of the esophagus, and to the development of taste organs along its entire length. In the place of the present stomach it is probable that the edentulous man will develop a gizzard. A gizzard would appear to be a labor-saving organ which is to be depended upon, and which is little liable to get out of order. A gizzard would probably be a great comfort to the overworked man of business and to the seeker after pleasure who spends much of his life in continental hotels. The ruminant stomach has many attractions. Its size would make it popular with the operating surgeon, and its leisurely method of disposing of its contents suggests intervals of calm in the rush of modern ruminant existence. Such a stomach in a human being would, however, be inconsistent with the exclusively human habit of after-dinner speaking, and the actual act of rumination would no doubt be inconsistent with the amenities of the modern drawing-room."

HYGIENE OF THE BARBER SHOP.

A NOTED French critic, writing of American customs, says: "The correct and well-dressed young men, many of them, are shaved each day by a public barber. You may see rows of small porcelain cups with the names of their owners upon them. These young gentlemen come in, take off their collars and neck-cloths, and then their faces are daubed with soap and rubbed by the hands of the barber and shaved. They are then wiped off with a towel, powdered, and without any further ablution on their part, they go thence to make love, or to kiss their wives and children, for all I know. This seems to me horribly dirty and painfully disagreeable." Whereupon a judicious contemporary comments as follows: "The above is a non-professional opinion of the American barber shop, and considers mainly the æsthetic features of that institution. If looked at from a professional standpoint, the objections will carry even more weight, and will relate largely to the transmission of disease.

"The writer, recently, when taking his seat in a barber's chair, observed two of his patients in adjoining chairs. One of these patients was then under treatment for a papular syphilide, and the other was just recovering from a tinea sycosis. The horror of the situation was intensified when our barber took from his pocket a stick of alum and was about to use it to staunch the slight bleeding

from an abrasion, had not a decided protest prevented his doing so.

"Can a barber shop be made aseptic? Such places, so-called, exist in Paris and in some cities of the United States, but as yet are not very popular; their greatest enemy is the barber himself. He cannot be made to understand the principles of asepsis and antisepsis. A book written upon the subject for the barber is needed, which gives in simple language the principles of asepsis, and the manner in which the various diseases are transmitted.

"In an aseptic barber shop many of the old-time utensils will be discarded. The mug, the brush and the cake of soap must be thrown away. In their place will be used a soft soap from a compressible tube, rubbed on the face with moistened aseptic fingers. The wire brush will be used, and with the metallic comb, the scissors and razor, must be taken from boiling water just before using. The towel will be a sterilized towel, and the puff box or magnesia cake will be replaced by the powder from a dusting box.

"Let us hope that the evolution of the barber shop will be rapid, and that every State in the Union will soon have laws for the examination and licensing of barbers—or at least follow the lead of the Board of Health of Quebec in requiring that they shall take certain precautions regarding the disinfection of the implements of their trade."

BORIC ACID.

THE attention of the public has been recently called through the investigation of the food supply of the army in Cuba, to the use of preservatives, more especially boric and salicylic acids. Much conflicting testimony was given as to their action upon the meats and upon the human system. Dr. B. H. Chittenden, Professor of Physiological Chemistry, in Yale University, says of boric acid and borax that when present in moderate quantities they can have but little or no deleterious effect upon the more important chemical processes of digestion. On the contrary, it would appear from the most careful experiments that the presence of these agents in small quantities may, in some cases at least, even accelerate the normal digestive process of the alimentary tract. Dr. J. I. Kippler, a German expert in all that pertains to food preservation, says the presence of boric acid in food stuffs has no detrimental action on the chemical activity of the digestive ferments. According to Nauman one part of boric acid to 1,000 acts as a preservative to meats or milk, and it is so rapidly eliminated by the healthy kidney as to prevent a retention in the system sufficient to be followed by any injurious consequence. Taken in large doses it is apt to produce gastric and intestinal disturbance and a partial paralysis of the nervous and muscular system. The worthlessness of much of the meat furnished, as was shown upon trial, was in a great measure due to its lack of nutrition.

AID TO DIAGNOSIS OF CANCER OF THE STOMACH.

GUINARD states (*Presse Med*,. Dec. 3, 1898) that by insufflating the stomach it is possible to disclose the existence of a tumor otherwise undiscoverable. If a tumor disappears after insufflation it shows that it must be located on the posterior wall. He insufflates with the tube and bulb of a thermo-cautery. The subject takes 25 to 30 centimetres of the tube in his mouth, first dipped in water or glycerine, and swallows it as he drinks a little water, like a tube of macaroni. He remarks: "Some people object, but with a little patience, authority and persuasion one arrives."

AN AMERICAN CARLSBAD.

AN attempt is being made by a syndicate of New York capitalists, with a capital of $1,000,000, to combine the principal springs of Saratoga under one management, and make that resort an American Carlsbad. It is the intention of the trust, if it materializes, to turn the valley in which all the principal springs are situated into a park, of which the present Congress Spring Park will be a part, which will extend seven miles, with a width of about a mile. A large sanitarium will be erected, where the water can be taken under the direction of physicians.

EXTERNAL APPLICATION OF NUTRIENTS.

THE fact that nutrients acting not only generally but locally can be introduced into the system through the skin with gentle massage is familiar to all physicians, who not infrequently avail themselves of this form of nutrition, especially in children. But the oils used are not always pleasant in their application, on account of their greasy, sticky character.

The recent request of a leading theatrical artist for some treatment to develop the neck and bust directed our attention to a new preparation recently introduced to the profession under the name of Krinogalon. The preparation is composed of oil of sweet almonds, chemically pure glycerine, boracic acid, gum benzoin, so admirably combined as to form a clear liquid, neither sticky nor greasy, and seems an ideal preparation

to accomplish the work desired. The result obtained in the clear skin, and the rounding out in full and beautiful proportions of the parts to which application was made, was all that could be desired. This form of local nutrition with massage produces results not likely to be obtained by general exercise or carefully selected diet.

DR. C. H. STRATZ, in an interesting work on the beauty of the "female form," discusses from the standpoint of a physiologist the cultivation of beauty, especially in women, on hygienic principles, and points out some curious pathogonomic symptoms in types of female beauty in famous works of art, showing that artists should study pathology as well as anatomy. Thus, according to his diagnosis, the celebrated Venus of Botticelli, in the Uffizi of Florence, shows unmistakable signs of consumption, and ought not to be sailing naked in an open shell across the sea. A modern example of the same kind is furnished by Franz Stuck's "Expulsion from Paradise," exhibited at Munich in 1891, in which peculiarly crooked limbs, enlarged joints and depressed ribs of our common mother indicate that she had suffered severely from rickets in her childhood. Still another instance cited is the Aphrodite in Klein's "Judgment of Paris," whose bodily formation proves that rachitis must have prevailed in the abode of the Grecian deities as well as in Eden before the Fall. If in these as in many other figure sketches, the artist had studied pathology as well as anatomy he would have pictured a higher type of the human form in the harmonious development of all its parts, such as it would present if trained in accordance with the laws of nature.

BICHROMATE OF POTASSIUM has long been a favorite remedy in the new school in inflammation of the mucous membrane, with tendency to plastic exudation and pseudo membrane, where excessive mucous secretion is rapidly turned into fibrinous exudate and false membrane. The discharges, either from the throat, stomach or bowels, are of a ropy, stringy character, and sometimes purulent. The inflammation often produces ulceration of the mucous surface which penetrates into the membrane. It is only recently that the old school has utilized this most potent remedy in a class of troubles for which it has been found specially adapted. We notice in a recent issue of the *Scottish Medical and Surgical Reporter*, Professor Fraser, of Edinburgh, reports a case where a chronic gastric ulcer of twenty years' standing had been cured by bichromate of potassium. The patient for a year had been bed ridden, the stomach so irritable that all nutrition had to be *per anum*. Of course there was great anæmia and ennervation, quick, weak and irregular pulse, with dry coated tongue. The abdomen was tense and distended, the stomach sensitive, the bowels flatulent and constipated, with dry, hard stools. On May 1, the sixteenth of a grain of the bichromate was administered. The vomiting, which had before been a most distressing sympton, ceased after the first dose of the bi-chromate, and all the symptoms rapidly improved until, on the 8th of June the entire group of gastric symptoms had disappeared, when a preparation of carbonate of iron with a solution of red marrow was substituted for the potassium salt. When seen on the 12th of February the patient had gained in weight three stone, and was in excellent bodily health. Professor Fraser says that in many other cases of chronic gastritis with persisting vomiting, which had defied every other medication, the use of the bichromate was attended with the happiest results. I is needless to say the remedy found so beneficient by Professor Fraser would have naturally been suggested to the mind of one familiar with the proving of drugs on the healthy human organism, the well defined symptoms of the disease being an accurate counterpart of the pathological condition produced by the drug, and therefore pointing to it in reduced strength as the indicated remedy. We may differ as it regards the correct name to give to this principle or law, or precisely how the result is produced, but the steps leading up to it are matters of scientific investigation and their general adoption pretty conclusive proof that while theory may point the way, the truth is only established by the strong, clear logic of science.

A MOVEMENT is on foot to raise a fund of $30,000 to the memory of Dr. Joseph O'Dwyer; the interest of the fund to support two O'Dwyer fellowships in pedriatics, open to competition to graduates in the United States, and to be held for two years. The details of the plan will be given to the public when fully arranged.

THE DISPENSARY BILL, which failed meeting the approval of previous governors, has been more successful this year, and has been signed by Governor Roosevelt. Hereafter all dispensaries in this State will be incorporated and governed by the State Board of

Charities. It is hoped this plan will do away with many of the abuses of charity organizations, which were used by thousands who could well afford to pay for medical advice when needed.

BIBLIOGRAPHICAL.

THE PATHOLOGY AND TREATMENT OF SEXUAL IMPOTENCE. By Victor G. Sexual, M. D. From the author's second German edition; revised and re-written. Philadelphia: W. B. Saunders. 12mo. pp. 291. Price, $2.00.

This belligerent author says in his preface that "when the first German edition of this work was published in 1889, there was some commotion in the ranks of old and young medical fogies, who were indignant that anyone dared to resist their intellectual tendencies, or refused to worship their superannuated gods. The second edition found the ranks of the same kind of professional formula-riders and bigots solid, though somewhat thinned. I have taken the liberty of preserving the independence of my altruistic opinions, and shall continue to fight against false and hypocritical quasi-scientific pretensions," and it is along this line that the work continues.

In order to give a fair review of the book we should have to quote from its pages more than our space will allow, and as the text is only suitable for medical men, and not for lay readers, we advise our readers to possess it, if interested in the subjects, and they will not be disappointed. The text reads smoothly, is most interesting and suggestive, and contains valuable original information.

ATLAS OF THE EXTERNAL DISEASES OF THE EYE, including a brief treatise on the Pathology and Treatment, by Professor Dr. O. Haab, of Zurich. Authorized translation from the German. Edited by N. E. De Schweintiz, A. M., M. D., with seventy-six colored plates and six engravings. Philadelphia: W. B. Saunders. 1899. pp. 228. $3.00 net.

This is another volume of Mr. Saunders' wonderful series, the sale of which we are told will reach 200,000 copies.

The book before us is an excellent companion to the author's "Atlas of Ophthalmoscopy and Ophthalmoscopic Diagnosis," and the result of wide clinical experience and trained observation. The text with its plates is so realistic that one actually experiences the atmosphere of the clinic in perusing it. The equal of this work has not been issued, and the student in this department will we are confident appreciate this fact, as it makes his studies easy.

The text is clear and concise, and the plates superbly understandable.

THE INTERNATIONAL MEDICAL ANNUAL AND PRACTITIONER'S INDEX. A Work of Reference for Medical Practitioners. Seventeenth year. 1899. New York: E. B. Treat & Co. Price, $3.00.

The volume before us shows that a vast amount of practical work has been done in all departments of medicine and surgery during the past year, and it is only through careful condensation that the work has been kept within the dimensions for handy reference.

The task is one of no small difficulty when we consider that it covers the literature of the world.

There are many books of this class being issued, but there is none which is more standard and popular with the profession than this, and the publishers are to be congratulated on having rounded the seventeenth year of publication. Our readers can make no mistake in adding this book to their libraries.

A TEXT-BOOK ON PRACTICAL OBSTETRICS. By Egbert H. Grandin, M. D., Gynæcologist to the Columbus Hospital; Consulting Gynæcologist to the French Hospital; late Consulting Obstetrician and Obstetric Surgeon of the New York Maternity Hospital; Fellow of the American Gynæcological Society, etc. With the collaboration of George W. Jarman, M. D., Gynæcologist to the Cancer Hospital; Instructor in Gynæcology in the Medical Department of the Columbia University; late Obstetric Surgeon of the New York Maternity Hospital; Fellow of the American Gynæcological Society, etc. Second edition. Revised and enlarged. Illustrated with sixty-four full-page photographic plates and eighty-six illustrations in the text. 6½ x 9½ inches. Pages xiv--461. Extra cloth, $4.00 net; Sheep, $4.75 net. The F. A. Davis Co., publishers, Philadelphia.

The present edition, thoroughly revised to accord with the great progress constantly being made in this department of medicine, continues to keep this work as the leading exemplifier of practical obstetrics from the modern standpoint.

It has been the aim of the authors to make the work so graphic as to enable the practitioner at a distance from the medical centers to acquire his knowledge *clinically*. It may well be called "a guide to practice." In obstetric surgery its key-note is *election*, is written from a teaching basis and necessarily imbued with the personality of the authors.

The illustrations all have the special end in view of teaching graphically, thus carrying out emphatically the personal characteristics of its authors. The work is a great advance over all previous books of its class and should be possessed by all who labor in this line.

LEHRBUCH DER BAKTERIOLOGIE, mit besonderer Berecksichtigung der bakteriologischen Untersuchung und Diagnostik, von Dr. Ludwig Hein, a. o. Professor fued Hygeine und Bakteriologie an der K. Universitaet Erlangen, etc. Mit 166 vielfach nach Originalphotogrammen hergestellten Abbildungen im Text, und mit 8 Tafeln in Lichtdruck, enthaltend 50 Photogramme von Mikroorganismen. Zweite Auflage, 604 pp. Verlag von Ferdinand Enke, Stuttgart, Germany, 1898.

This very good work of Professor L. Heim on Bacteriology now enters its second edition. The favorable reception met by the first soon led to a second. It is decidedly practical, and at the same time scientific. It intends to give a view of the broad subject of bacteriology, and to introduce the reader of the broad subject into the practical details. The second edition has been advanced to the latest acquirements of this branch of medicine. The first part deals with the bacteriological examination in general, as well as on the morphological and biological characteristics of bacteria. The second portion first presents the classification and description of the more important micro-organisms. As to diagnosis, one is taught how to detect them in the human body and its surroundings. Tables of the important germs are given, that one may easily arrange them in classes. The diagnostic section is particularly good, scientific and practical. The different excretions and secretions of the various organs, with their diseases and the methods of the detection of them, are given, with the various differentiating features, and other facts necessary to be known.

The third portion, or suppplement, presents general rules to follow in arranging bacteriological laboratories, the requisite apparatuses, etc. Formulas for staining solutions are scattered through the work, with all the practical hints for beginners. Indeed, written as it is, for the practicing physician, it is also intended as a guide for those who have to do with public sanitation, disinfection, examination of water, and the clinician, who would gain a deeper knowledge of the causes of diseases. It is to be both a guide and a teacher. Those who have not been able to pursue a practical course in bacteriology and to gain practical methods and ways, will be able to attain results if they only follow directions, step by step, as he gives.

The work terminates with eight very good and clear photogravures accompanied by explanations, in which the most important micro-organisms are lucidly represented. This text-book has met with a very friendly reception in Germany, which it certainly deserves. The typographical part is very well done, as is characteristic of this publishing firm. The wood-cuts are clear and illustrative.

HANDBUCH DER ERNAEHRUNGSTHERAPIE UND DIAETETIK, unter Mitwirkung von mehreren Gelehrten herausgegeben von E. von Leyden, Zweiter Band, zweite Abtheilung, pp. 391-825. Georg Thieme, Leipsic, Germany, publisher. Price, 10 marks. 1899. Paper covers.

This is the second part of the second volume of von Leyden's very excellent and thorough work on alimentary therapeutics and dietetics, which has twice been noticed in previous numbers of this journal. This part is one of the best of the entire work, and presents the subject from all points of view. The opening chapter on the dietetics of acute febrile diseases is by the editor and Professor Klemperen. Professor Carl von Noorden presents the dietetic management of diabetes mellitus quite scientifically, and at the same time, with an eye to the practical understanding of the requisite measures. Professor O. Minkowski, who is well known for his work in the pathology of the pancreas, has elaborated the dietetic treatment of the uric acid diathesis, gout, arthritis deformans, oxaluria and phosphaturia. Professor Hermann Nothnagel, of Vienna, devotes a chapter to the alimentation in chlorosis, anaemia, leukaemia, pseudo-leukaemia, Basedow's disease, myxoedema and Addison's disease, which, though short, is comprehensive. Professors E. Mosler and E. Peiper give the dietetics of cutaneous affections. Prof. P. Fuerbringer discusses the diet of disturbances of the sexual functions and syphilis. Professor H. v. Ziemssen takes the very important subject of diet in kidney diseases, and Dr. M. Mendelsohn presents a short section on that of affections of the urinary passages. Professor F. v. Winkel, of Munich, an able man, writes on dietetic measures in diseases of women. Professor H. Biedert recapitulates the dietary management of children's diseases. Professor Hans Kehr, in the final chapter, terminates with the important section on diet before and after operations.

This work on dietetics is one of the best that ever has been brought before the profession, and undertaken by eminent authorities, each of whom is great in his branch. It is very scientific, and again, at the same time, very practical. Each subject is gone into with characteric Teutonic thoroughness, and not only is the theoretical side printed, but the every-day, practical, as well. Practical recipes are included, minute directions added, and everything given that each necessary detail be clear. Here and there the medicamentous treatment is touched upon, where an adjuvant to dietetic management is necessary. It is a work which may be consulted with full satisfaction. The price of the whole two volumes is thirty-five marks.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.

ACADEMY OF MEDICINE.

The Deceptive Calms of Appendititis.—The following excellent suggestions were presented to the Academy by M. Dienlafoy (we give them as concisely as possible): First: The abdominal pain, vomiting, and fever of appendicitis are sometimes followed by a sudden mitigation and disappearance of pain and fever, and great improvement of patient. Second: But this is not always the signal of real amelioration of the disease; it is often a false and deceptive calm. Third: This false and deceptive calm frequently coincides with the formation of formidable lesions, gangrene of the appendix, peritoneal septicemia, diffused peritonitis, etc. Fourth: Nor is the calm always complete; it differs from a real amelioration by the persistence of some of the symptoms. The belly continues tympanitic, more or less, muscular tension does not always disappear, acceleration of the pulse persists, even if the temperature falls; urobilinuria and albuminuria are not rare. Fifth: This false calm is sometimes promoted by medication; viz.: injections of morphine, also by ice bags, which mask the evolution of menacing symptoms. Sixth: The deceptive calm appears at variable periods, on the second, fourth or sixth day of the appendicitis. Seventh: They coincide with the development of the greatest peritoneal lesions; they show the errors of the descriptions which divide appendicitis and peritonitis into two distinct periods. Such descriptions are fatally erroneous, for most generally the symptoms of appendicitis and peritonitis are similar, connected and synchronous, and it is not possible to say at what moment peritonitis begins. Eighth: The deceptive calms of appendicitis are often the cause of death. The physician or surgeon who temporizes or hesitates too much, and eagerly uses this so-called mitigation of the malady to adjourn or even avoid surgical intervention, believing that there will be time enough to operate, often sees the supervention of terrible results, against which surgical treatment is powerless, and the patient dies. Ninth: Distrust these traitorous calms of appendicitis, recognize them, and operate without delay, if you wish to save your patient from death.

Treatment of Variola.—First: General treatment: The only internal treatment which appears to be active is the combined employment of opium and ether (ethero-opiate of Dr. Castel). Inject morning and evening a full Pravaz syringe of ether into the cellular tissue of the lumbar region, buttocks or thigh, or give patient six to ten spoonfuls of syrup of ether daily, 10 centigrammes of extract Thebaic, 7 for a woman. To drink during the day:

Perchloride of Iron	xx grs.
Syrup of Orange Flower	35 grammes.
Aqua	100 grammes.

Let patient have 40 to 80 grammes of alcohol. Treatment efficacious during first days of eruption: Cold baths, temperature 18° to 20° for adult, 21° to 23° for children. External treatment: Sublimate applied externally; baths, 33° to 35°, containing 10 grammes sublimate dissolved in alcohol; fifteen minutes for bath. During dessication simple bath, with boric acid mixed. Cover head with bandages dipped in solution of sublimate. Protect mucous membranes, wash mouth and eyes with borated water, also pharynx with equal parts of salol and glycerine every two hours. Hebra powders integuments with salicylic acid, talc and starch. Complications: In cases of myocarditis use cafeine; reject digitalis, opium and cold baths for nervous conditions, and alcoholic delirium. In hemorrhagic variola employ preparations of ergot, alcohol, acetate of ammonia. Confluent and hemorrhagic variola together are always fatal, secondary hemorrhagic and coherent are grave, without being mortal. Disease may become grave from complications, but often cured: varioloid always cured.

FOREIGN.

Infection of Surgical Wounds by Mouth of Operator.—M. Huberner.—Flügge has shown that when a person speaks, even in a very low tone, he projects a cloud of microscopic droplets, charged with bacteria, from the mouth, which in a little time will settle upon surrounding objects. He asks if certain cases of suppuration of wounds, after a rigidly aseptic operation, may not be attributed to bacteria projected from the mouth of the surgeon at the moment he gives orders or explanations. To verify this Hubener undertook, at the clinic of Mikulier, a series of experiments, conducted as follows: Upon a table, representing an operating table, four boxes of Petri were placed in the form of a cross. After rinsing the mouth with a culture of "prodigiosus," he placed himself about 50 centimeters from the nearest box, and for ten minutes he counted, in an ordinary tone of voice, in a deep tone, and also a high tone. The experiment showed that in all cases, especially of the high tone, the cultures of "prodigiosus" were developed in the boxes, and were particularly abundant in those nearest the mouth. In a second series of experiments, conducted like the preceding, the author spoke through a mask that resembled that of Esmarch for using chloroform. During the experiments, besides counting, he coughed and sneezed, and the mask was found to have retained all the bacteria and, in the majority of cases the boxes were sterile. One may then admit that if the surgeon should be affected with stomatitis or rhinopharyngitis, the mask would be a sufficient barrier against bacteria, and would prevent them from passing from the mouth of the operator to the wound of the patient. To see if the wound could be infected by the patient, who, while under the influence of chloroform or ether, had a forced respiration, attacks of cough, etc., the author placed boxes on the abdomen, chest, and by the head while he gave chloroform. The results were negative. Finally, experiments were made

with lepra, with Petri's boxes, and with and without mask. It was found that without the mask, and in the space of ten minutes, nearly 90,000 leprous bacilli were projected; with the mask, the number was from twenty to seventy times less.

MEDICO-CHIRURGICAL SOCIETY

Incompatibility of Certain Drugs.—M. Meusier.—The mixture of tinctures, such as of kola, quinine or canella, with the tincture of colombo, of which the active principle is menispermine, is precipitated by the tannin of the first. Chlorhydrate of cocaine should never be added to saturated chloroform water, for the chloroform being much less soluble in water containing cocaine than in distilled water is precipitated in extremely fine drops. To prevent this action it is necessary either to weaken the saturated chloroform water by 42 per cent. of water, or add 1 per cent. of citric acid or 5 per cent. of alcohol. When chlorate of potash and alum or sulphate of alumina, are dissolved simultaneously, free chlorine is produced, to which certain effects of the mixture may be attributed, and which is transformed by degrees into chlorhydric acid. If iodide of potassium and neapolitan ointment be mingled in a pomade, mercurial iodides will form during the mixing, capable of producing a vesicating erythema, as often proved.

Treatment of Superficial Burns.—M. Menard.—Among the antiseptics, first, a pomade of iodoform composed of the following ingredients:

Iodoform	ogr. 50 to 1 gramme.
Antipyrine	
Boric acid	aa 5 "
Vaseline	40 "

Bidder, of Berlin, recommends thiol as one of the most valuable substances that can be used in burns. After aseptizing the affected parts bathe the burned surfaces and surrounding healthy skin with a solution of thiol, 40 to 100; cover with lint. K. Von Bardeleben uses equal parts of subnitrate of bismuth and starch, after disinfection by phenic or salicylic solution. Wertheimber, of Munich, applies an oleo calcareous and thymol liniment.

Thymol	ogr. 10 to ogr. 20
Lime water and linseed oil	aa 100 grammes

Also applications of euphorine (phenylurethane) in powder, pomade or alcohol solution, 10 to 100; of diaphterine (oxyquinaseptol), 1 to 100, and preparations of the sozoiodolate of potassium. Filleul treats superficial burns with saturated solution of picric acid. This acid is antiseptic, analgesic and keratoplastic; its objection is its yellow stain upon the tissues and hands, which Miles, of Edinburgh, counteracts by vaseline and afterwards washing in alcohol. To soothe pain and prevent the formation of phlyctenæ, Starr employs the following:

Liquid perchloride of iron	6 grammes
Vaseline	24 "

Haas uses a pomade of aristol, 20 grammes in 40 of olive oil, adds 40 gr. of lanoline and vaseline. The following formulæ are prescribed by MM. Landolt and Gygax.

For first degree of burns:

Chlorhydrate of cocaine	1 gr. 50
Vaseline and distilled water	aa 10 grammes
Lanoline	3 grammes

Second degree:

Chlorhydrate of cocaine	1 gr. 50
Salol	5 grammes
Vaseline	25 "

Third degree:

Europhene	1 gr. 50
Olive oil	3 gr. 50
Lanoline	15 grammes
Vaseline	30 "

Employed especially for burns of the eyelids. Wintermitz, of Vienna, employs concentrated decoction of myrtle and solution of chloride of soda. Leistikow, of Hamburg. Following is his formulæ:

First degree:

Ichthyol	2 grammes
Oxide of zinc	10 "
Carbonate of magnesia	20 "

Second degree:

Ichthyol	3 grammes
Oxide of zinc	10 "
Starch, prepared chalk, limewater and linseed oil	aa 20 "

Vergely, of Bordeaux, a paste of calcined magnesia. Poggi, to relieve pain, local bathing with nitrate of potassium, or compresses with saturated solution of this salt. McInnis: Essence of terabin, parts covered with gum taffetas. Tommasoli, of Palermo: Large injections of artificial serum. Calliano: After thorough aseptic cleansing of burnt surfaces with cold water, previously boiled, or with a solution of phenic acid, 1 or 3 to 100, boric acid, 3 or 4 to 100, or sublimate, 50 to 1,000, applies compresses of sterilized gauze, dipped in cold boiled water or cold boric solution renewed every five or ten minutes, the best sedative for the pain accompanying first of reaction of burns. Without asepsis the best treatment avails nothing, and in general the more perfect the asepsis the less necessity for dressings.

SURGICAL CONGRESS.

Tuberculosis of the Caecum.—M. Tedenat, of Montpelier, reported observation of the above that gave place to tumor resembling cancer. Symptoms were those of dyspepsia and constipation, general health good, occasional appearances of slight appendicitis; an ileo-colic resection of the tumor was made. M. Jonesco observed three cases of this kind; made ileo-colic anastomosis without touching the tumor, which finally disappeared.

Tuberculous Spina Ventosa.—M. Menard.—Tuberculosis of the long bones of the hand and foot is, from the beginning, localized in the medullary canal, or the center of an epiphysis, and rapidly extends from one epiphysis to the other. Later on, a sequestrum, large or small, is found, or only fungosities. The hyperostosis, which from the first completely covers the diaphysis, perforated and ulcerated, is the product of a second reaction of the periosteum; the isolated periostitis has not been observed. The treatment is medical before the period of abscess or fistulæ; afterwards prevent secondary arthritis by removal of diseased bone from one epiphysis to the other. Avoid sub-periosteal ablation, as it will be followed by a reproduction of the removed bone.

BIOLOGICAL SOCIETY.

M. Weiss.—The traction that increases the excitability of muscle diminishes that of the nerve, not attributable to the separation of the motor plate, which is not really terminal, as might be supposed, but gives origin to fine branches forming a circuit. MM. Chambrelent and Pachon have studied the influence of asphyxia upon uterine contractions. In pregnant rabbits section of the pneumogastrics induces death by progressive asphyxia in forty-eight hours without producing foetal expulsion, except in rabbits at term, in which the traumatism alone seems to act. MM. Ballet and Faure gave injections of macerated chewing tobacco, 10 to 100. The injections of 2 cc., given to different animals produced convulsive accidents of two types, the first a great crisis with tonic or clonic phenomena, the second irregular movements, with violent agitation, leaping and death following rapidly, if the injection was sufficient. These researches are interesting as applied to toxic epilepsy and the action of tobacco. MM. Uery and Frézals (Bordeaux). The mode of action of aqueous or oily remedies and pomade applied to the eyeball is, first, aqueous collyria, penetrating into the anterior chamber by the cornea, and slightly by the conjunctiva; second, the cornea acts as a succession of membranes of different permeability and superposed; third, the cornea does not absorb fatty bodies. These only penetrate after being dissolved in the tears. MM. Thiercelin and Rosenthal found an encapsulated diplococcus in a case of acute meningitis in the blood from the arm during life, and in the pus of the meninges after death. M. Carriere (Lille) found in animals asphyxiated by carbonic acid the blood of a remarkable eosinophile, resembling the eosinophile cells so frequent in the expectoration of tubercle and of different respiration. Like MM. Gilbert and Weil, M. Hayem has proved qualitative modifications of leucocytes in chlorosis, excess of hemoglobin, hypertrophy of certain white globules, certain mononuclei, large and granular. M. Railliet saw in an animal, dead during gestation, an osseous embolus in an artery. It was costal cartilage of a foetus that, after perforating the uterus, had penetrated the vena cava, right ventricle and pulmonary artery.

OBSTETRICAL SOCIETY OF PARIS.

M. Boullé reported a case of mania after a perfectly normal delivery, and occurring during the sequelæ. Tem-

perature elevated to 40°, quantity of urine diminished, small proportion of albumin. Under milk regimen and intravenous injection of salt water, given occasionally, the mania and hallucinations disappeared, and quantity of urine increased; cured in fifteen days.

MEDICAL SOCIETY OF PHYSICIANS.

M. Hugon, upon the action of massage in hepatic colic, advised progressive massage, gentle at first, to soothe pain and enable patient to bear more profound and active manipulations. Observations were cited proving the utility of massage in hepatic colic. M. Gariner read a communication upon treatment of placental retention after abortion. It is best to intervene without delay, and relieve the uterine cavity completely of the debris of the ovum.

J. A. C.

HOSPITAL REPORTS.

CLINIC ON DISEASES OF THE SKIN.*

By Charles Warrenne Allen, M.D.,

Consulting Genito-Urinary Surgeon to the City (Charity) Hospital; Consulting Dermatologist to the Randall's Island Hospital; to the Hackensack Hospital; to the Bayonne Hospital; to the Infant Asylum of the Holy Rosary; Attending Surgeon to the Good Samaritan Dispensary (Department of the Skin,) etc.

Gentlemen: The first patient we present to-day illustrates rather the results of an accident than a skin disease. Denuded areas varying from the size of a fifty-cent piece to that of the palm occupy the region of the chest and back. Some are more or less circumscribed in outline, others irregular, but all are tender and bleed on the slightest touch. The region occupied suggests at once zoster pectoralis, but the distribution is so irregular, and passes the middle line both in front and upon the posterior aspects of the trunk that this diagnosis is at once excluded. Here and there, there is deep pitting which would not wholly exclude the diagnosis of zona, since in the latter affection there are gangrenous forms which are markedly destructive of tissue. Upon questioning the patient he tells that one week ago he had pain in the chest and sought medical advice. The physician prescribed something with which the whole trunk was to be vigorously rubbed. The next morning the skin was found to be severely burned and since that time efforts have been made to bring about a cure with only partial results, the lesions showing but slight tendency to heal.

A copy of the prescription which the patient has secured I now present to you. It is as follows:

℞ Menthol
Ext. Aconite
Tinct. Belladonnæ
Tinct. opii aa ʒj
Zinc. chlor. ad ℥ iij

The physician evidently meant to write for mng. zinc. oxid, and by one of those curious lapses of co-ordination between head and hand, caused the prescriber to order something he did not mean.

We will cover the man's chest with a 1 per cent. picric acid solution, which has been found to be one of the most grateful and efficacious remedies in burns of various degrees and stages. Over this we will spread a piece of cheese cloth smeared with vaseline, or cold cream, to protect from friction and irritation.

The next patient, a woman, aged thirty-two, presents a rather interesting condition in that the present eruption is really secondary to an entirely different condition. Four weeks ago small scally round patches began to appear over the upper part of the chest, which were extremely itchy. These have been scratched and irritated with a coarse flesh-brush until they have become transformed into veritable agues of eczema, the clinical features of the original trouble being almost obliterated.

We will treat her with a wash of lysol, ¼ per cent. strength, to be used over the whole body twice daily.

The next case is no less interesting being rather rare; it is one of purpura-like lesions in an infant of sixteen months; it is of two days duration and limited to the region from the hips down to and including the feet and foot soles, cheeks, forearm and hands, with a single patch of small blue spots upon the right side of the chest. Upon examining more closely we find at the border of the grayish patches, extending up over the hips, a distinctly raised red margin; this is a condition not present in purpura proper but it stamps the affection as one of erythema multiformi of the purpuric variety. The mother tells us that the illness began three days ago with rather severe diarrhoea, which lasted two days. It was upon the second day that she noticed the blotchy redness of the legs and feet, the child being restless and feverish as she supposed from teething. These spots have rapidly changed from dark-red to bluish, grayish, greenish and even yellowish tinge until now the variegated appearance presenting is very striking. The temperature, taken per rectum, is 100 degrees F., but the tongue is clean and the child takes the breast. We should examine the interior of the mouth for the reason that noma has occasionally begun with just such symptoms especially after severe disease. Although this child does not look particularly healthy, the mother says the child has had no illness since a summer diarrhoea. Inspection of the mouth is, fortunately, negative.

We will give this child small doses of resorcin, as follows:

℞ Resorcin..... gr. j
Spts. vini rect..... ʒ iv
Aquæ..... ad ℥ ij
M. S. A teaspoonful every three hours in milk.

The next case, also a little child, is presented on account of an ulcer in the corner of the mouth which extends somewhat upon the mucous membrane as a bleached patch, the color being that of a washerwoman's hands after a day's wash. The actual ulcer, which is at the commissure, is round, but until distended by widely opening the mouth, appears to have over-hanging edges. This is a distinctively specific lesion although the only one which the child presents upon the body at the present time. The parents, who accompany the child, say that there has never been any eruption upon the body nor any other evidences of infection. Upon examining the mother we find a pigmentary syphilide upon the neck which is unmistakable in its features. Scattered over a pigmentation which would on superficial inspection possibly be called a dirty neck, are small white areas of leucoderma. This is not the result of a preceding syphilide which has disappeared, but exists as a condition *per se*. The condition is not so very uncommon, especially in women, but is frequently overlooked. At times there is a reticulated appearance as though a lace neck-handerchief had been worn through the meshes of which sunburn had taken place. The father presents a scar at the naso-labial fold which marks the site of the infected sore accidently acquired, and, aside from the patches in the margin of the tongue, presents no other manifestations of his infection.

The history is very interesting and instructive, showing how a family syphilis of the most innocent kind may exist, involving all its members. The history dates back to May, 1897, when a wet-nurse was taken into the family to suckle the first-born. This infant acquired syphilis from the unsuspected nurse, who was at once discharged. But the child becoming so ill that its life was despaired of, the mother, in her pity, put it to her own breast and, in the course of time, discovered that she herself had become infected. The history shows that after this child's death the mother became pregnant but carried out an inunction course during a considerable part of her term of pregnancy. So that, until now, she has considered herself quite free from the disease and has looked upon the child before us, born at term, as having escaped infection.

The result of our examination to-day shows this belief to have been unfounded. The child is now two years of age. The father was first seen in February, 1898: he then had a primary lesion at the center of the upper lip where the naso-labial junction is. He was put at once upon a

*Delivered January 9, 1899, at the Good Samaritan Dispensary, New York City.

course of injections of bichloride of mercury and has since taken protoiodide of mercury internally with the result that he has remained well with the exception of occasional mucous patches in his mouth and some sore throat. We will give the mother and father each an additional course of twelve injections, and the child an equal number of inunctions.

This next case illustrates a rather rare condition for a child of three years to present, namely, a chronic eczema of all the fingers of one hand which has existed for over three months and which, from paronychial involvement, has produced nail changes similar to those often found in chronic eczema of the adult, especially in dishwashers and barkeepers. The child has been under almost constant treatment the mother tells us, but despite this the flexor surfaces and interdigital surfaces of the distal extremities and the dorsal surfaces of the fingers are involved in a chronic infiltration with decided thickening and desquammation, the skin about the attached extremity of the nails being thickened and the nail loosened and curved upward at the free extremity. This is undoubtedly, as in the adult, a form of mycotic affection. The mother cannot tell us just what treatment has been pursued, but until the infiltration has become very much reduced we will apply to the fingers, each being separately bound up, a five per cent. ichthyol ointment, drawing over each finger a diminutive rubber condom to protect the dressings from dirt and water as well as to retain the application well in place and keep up a moderate degree of pressure. In the absence of rubber finger shields an impervious or occlusive dressing may be readily made by covering each finger separately with pledgets of cotton, painted over with ten per cent. ichthyol collodion.

This next case is also one of eczema, but in an entirely different form. The boy, of four years, presents a papulo-vesicular eczema over the whole chest, shoulders, neck with a few scattered lesions over the face and hips, none being present upon the arms or legs.

The diagnosis of scabies is excluded by the location alone, and the entire absence of lesions from the feet and hands. Pediculosis vestimentorum is excluded by the presence of lesions upon the face, the absence of excessive scratch marks between the shoulders and about the waist where the clothing makes pressure and the failure to find evidences of the pediculus or its eggs in the undershirt. As to the form of eczema, the seborrhoeal is excluded by the absence from the scalp and cheeks and of the ringed-formed lesions in the center of the chest and freedom of the groin and flexures. The impetiginous variety is excluded by the entire absence of pustules and yellow crusts. The only complication is the blood-stained scratch marks. This leaves us nothing but the neurotic or reflex eczema by which to designate the condition. The mother tells us that a few spots appeared upon the chest one week before the child broke out with measles. After recovering from the latter the same kind of spots spread over the whole trunk and are now coming for the first time upon the face. We have found no other etiological factor than the measles to accuse as the cause of this reflex disturbance, and we must regard it as one of the unusual associated conditions occurring as a premonitory rash and continuing as a sequelæ. On account of the severe itching, at night especially, we will order a one to eight hundred solution of lysol as a wash to apply twice a day and to be followed at bedtime by a two per cent. beta-naphthol ointment.

The next little patient, seven weeks of age, presents still another variety of eczema, namely, the seborrhoeal form. Ever since birth the child has been troubled, more or less, with crusta lactea, or thick oily crusts mixed with desquammated epithelium covering the anterior portion of the scalp, especially in the neighborhood of the fontenelle. For the past two weeks there has been a moist intertrigo of both groin regions, or what is in this instance properly called an intertriginous eczema. The condition is not limited to the folds at the groin, but extends up over the abdomen and down upon the thighs even to the calf as an erythemato-squamous eczema in parts diffused, with outlying small patches.

We will apply here the combination treatment, that is a one-half per cent. resorcin and lanolin ointment for the scalp and non-moist areas while the more inflammatory and more tender regions occupied by the eczema rubrum we will paint with three per cent. watery solution of methylene blue. I will here say to you, gentlemen, that of all drugs and applications found useful in intertrigo and intertriginous eczema, which is so common an affection in infantile life, there is nothing which, in my experience, gives so prompt and marked relief from the irritation and effects a cure in so short a time.

The next patient is a young lady of seventeen who first presented herself three months ago with psoriasis of the body which had existed for three years; the whole forehead was involved in a combination of seborrhoeal eczema and psoriasis, a combination which I have often pointed out as present in psoritic cases, the seborrhoeal element somewhat predominating and determining the clinical features of the eruption. In this young lady a patch of scalloped outline extending from the margin of the hair to the brow recently existed. Laterally it extended to the temples, producing so much disfiguration that, unless the hair was worn in a bang hanging down to the brows, it would have been impossible for the young lady to go into society. Naturally, a patient with such a condition is much more persistent in the endeavor to get relief than one in whom the lesions are on hidden portions of the body. Persistent application of remedies, including first resorcin until the seborrhoeal element was largely eliminated and much of the infiltration had been removed, and then applying a five per cent. chrysobin ointment, well rubbed in each day with the finger tip, the excess being carefully wiped off from the surrounding skin to prevent disfiguring dermatitis and the danger of the irritation from the well known irritating qualities of this remedy, has given a result that has been all that could be desired. As the patient presents herself here to-day she is scarcely to be recognized as the patient who applied for treatment three months ago. The lesions upon the body have almost disappeared. During the past two weeks she has been taking powdered thyroid in five grain doses and we will continue this for the present, but whether with any benefit is difficult to say. It has seemed to operate with any marked degree of efficiency only in patients who are at the same time over fat.

The next three patients all present conditions of ringworm. In the case of a little girl with diffuse ring-worm of the scalp we get an indefinite history; but this condition has undoubtedly been going on for months unobserved and without treatment; her younger sister showing the small bald patch over the temporal region of evidently quite recent development; and a small boy with a twenty-five cent piece sized ring over the malar region. The boy is not related to the other patients, although just this combination of scalp ring-worm in one member of a family and skin ring-worm in another member of the same family is not uncommon.

The treatment in these cases is somewhat different. The surface ring-worm we can cure in a single application with formol in full strength rubbed in vigorously with a pledget of cotton twisted on a tooth-pick. We will apply this treatment likewise to the bald patch of the younger girl. In the older child, who has thick coarse, red hair, we will first have the hair cut off short and the scalp washed for a few days with a one per cent. solution of green soap in water to which one-quarter per cent. lysol is added. After this we will paint the entire area of scalp involved with a five per cent. chyrsarobin collodion.

SURGICAL CLINIC HELD AT ROOSEVELT HOSPITAL (SYMS OPERATING BUILDING), JANUARY 21, 1899.

By Alexander B. Johnson, M.D.

RECURRENT APPENDICITIS.

This patient, gentlemen, was operated upon last Saturday by Dr. McBurney for recurrent attacks of appendicitis. This man is twenty-nine years of age, and he has had attacks of this trouble extending over a period of seven years. He was in constant menace of his life. His appendix was removed. There were found no adhesions which could give rise to any intro-peritoneal process. The appendix itself showed marked changes. It contained several concretions, and its calibre, near the proximal end, was diminished by reason of a thickening of the mucous membrane; the mucous coat and all the coats of the ap-

pendix were thickened, the mucous coat markedly changed by inflammation. It was one of those appendices which might become the subject of several attacks. The stump of the appendix was inverted, and the opening closed by sutures. The patient has had no pain or discomfort since the operation, and the parts have healed by primary union. Here are found a few points of granulation, where the rubber drainage was removed. There is a little discoloration of the skin from blood. The patient will be kept in bed another week, and then he will be allowed to get up and go home without further treatment, and there is no doubt but that he will remain well.

DEFORMITY OF KNEE-JOINT: RESECTION.

The other case operated upon last Saturday was a woman, thirty-five years or thereabouts, who had suffered with chronic disturbance of the knee-joint for several years, and in which there was a marked degree of deformity; there was a marked dislocation of the tibia backwards. There was a good deal of rotation, the foot being rotated outwards. There was much thickening, with anchylosis, and an entire inability to use the joint. The knee-joint was resected by the ordinary method, and the lesion found was extensive, the upper pouch and synovial membrane being obliterated. The patella was adherent to the condyle. A large part of the joint cavity was found to be obliterated, and its place taken by granulation tissue. There was an active focus near the inner condyle of the tibia, and all the changes showed that this disease had existed for a long time.

The pathologist's report showed that the lesions were of a suppurative character; this was more marked than the tubercular lesion. This is a condition that often happens. The tubercular lesions destroy the cartilage; this is followed by destruction of bone, and there is then actual danger to life. What is not uncommon after operations upon large joints, she had a great deal of pain, lasting several days; there is no operation in which the after-pain is more marked. She also had a sudden and high rise of temperature, up to 103 or little more, but without a corresponding rise in pulse rate. In nearly all operations where there is a large wound surface there is a certain amount of effused blood, which always gives rise to some temperature. This rise in temperature is due to the absorption of material, which is the result of fermentative changes. The condition will pass away, although it may be necessary occasionally to take down the dressings and remove the blood-clot. The dressings that are now on shall not be removed probably at all during the next fortnight.

NEPHROPTOSIS (NEPHRORRAPHY).

The first case that I will operate upon to-day is that of a woman, twenty-seven years of age. She is poorly nourished, and has suffered for the past three years from various symptoms of ill health, most prominent of which have been more or less constant pains in the loins. Occasionally there have been several attacks of pain resembling renal colic. In the periods accompanying the attacks of pain she passed a diminished amount of urine, and there were present signs of movable tumor in the right hypochordrium, which, in size and shape, was easily recognized as kidney. In other words, the woman has a movable kidney, with characteristic symptoms of that condition. The pain, however, has not been confined to her side; it has been on the opposite side, with downward extension. In these cases it is very important that we should differentiate between troubles due to displaced uterus and diseases of the tubes and ovaries; this is not always easy to do. Sometimes one may operate and find the symptoms persisting, that he has made a mistake in diagnosis; yet in patients complaining of these pains, with indigestion and marked disturbances of the general health, when a movable kidney is found, I think it is justifiable to operate. This trouble occurs in persons who are poorly nourished. It is rare in men; among the fifteen cases treated here, only two occurred in men, one of whom was very poorly nourished. In a large proportion of cases the right kidney is more often affected, probably because the liver is on that side, which tends to push the kidney downwards; also produced in women who wear tight stays. Many instances of movable kidney are seen as a portion of the general condition of enteroptosis, a condition in which all the abdominal viscera, on account of the relaxed condition, tend to fall downwards.

The operation proposed is to fix the kidney in rather a normal position. There are many ways of doing this. The one ordinarily done I will do here, which is to expose the kidney, push it up into the wound, split the capsule, laying bare the kidney substance, and sew the fibrous capsule to the muscular wall by means of catgut; then a portion of the wound will be closed by sutures, a portion being left open, in which will be packed sterilized packing, and the wound allowed to heal by granulations. The entire process takes about thirty-five days from the time of the operation, and healing occurs without suppuration. The kidney is always fixed, and in most instances all the symptoms disappear. Recently a new operation has been devised, which is a little more troublesome, and one which I do not see has any advantage over the one done by suturing; this operation consists in splitting the deep lumbar fascia and pushing the kidney in the opening so made. Another method proposed consists in incising the loin, splitting the capsule and suturing by means of permanent sutures, such as silk-worm gut. To me this does not appeal to reason; usually when silk-worm gut is used the wound is closed. Fixing the kidney by means of living tissues appears to me to be more reasonable. I know of one operation in which silk-worm gut was used for fixing the kidney, in which, according to the patient's statement, she was quite conscious after a few months of a movable kidney. I examined her, and found her statement to be true.

Under my fingers I now feel the kidney, slipping up and down. I will now proceed with the operation. The direction in which the cut is made for the exposure of the kidney is not of great consequence. A good incision is one running obliquely downwards and forwards, four to six inches in length. Begin it just below the last rib, and about the external border, and the erector spinae. After dividing the muscular layers throughout the length of the would, one exposes the sac which surrounds the capsule of the kidney. Now, when I introduce my finger into the wound I can feel the kidney, and can push it about in a variety of directions. This loose layer of fat, which lies about the kidney, may be passed through by blunt dissection. This red convex surface you see here is the kidney. After cutting about 1½ or 2 inches, depending upon the size of the organ, with handle of the scalpel, I strip through an area of perhaps one-half or three-quarters of an inch on each side. That furnishes a sufficiently broad surface of the kidney for the adhesions to form. I begin now by passing sutures where I intend to fasten the capsule propria through the muscular wall. As to the number of sutures used in attaching the capsule to the muscular layers there is much variation. One must try to make an actual approximation between these structures. Generally speaking, from five to eight, or even ten, sutures may be properly put in. I now have in seven sutures, attaching the capsule to the muscular layer of the loin, and I have no doubt the kidney is firmly anchored. This wound is to be left open, and we expect granulations to form, and so anchor the kidney firmly in the wound. The ends of the wound only will be closed. The wound will be packed with sterilized packing, in such a way that the wound will heal up from the bottom by granulations. Every few days the packing will be changed, and at the end of thirty-five days the wound will be healed and the patient will be comfortable. Of course, it is rather important that, after the operation, the patient should be kept quiet, because the catgut no doubt does not keep the kidney firmly anchored.

SKIN GRAFTING: THIERSCH'S METHOD.

This woman was operated upon a few weeks ago for an extensive carcinoma of the breast and axillary glands. A very large part of the skin had to be sacrificed, which has resulted in a very large granulating area, which would take a very long time to heal. One portion of the wound had to be left open on account of the large amount of skin removed. The case was not considered a favorable one for cure; not even was it hoped that any good would result, but it was thought highly important for this woman to have at least a period of immunity, and so, by means of skin grafts, we will endeavor to close the raw surface, although it will not cure. In applying skin grafts to a granulating area, if the granulations are of the best quality, they can be applied without previous preparation. They take most satisfactorily if the granulations are removed

with a scoopmor knife, the fresh raw surface being so prepared. Of course, it would take a long time for the granulating surface to heal from the edges; but if this grafting is successful, it will be healed over in about a fortnight. Previous to operation, the ulcer and surrounding skin should be thoroughly aseptisized. Apply dressings wet with salt-solution dressings, until time of operation. At time of operation remove the dressings from the ulcer, scrape the ulcer and its edges, irrigate with salt-solution, and compress to arrest hemorrhage. Grafts are then obtained by putting the skin upon a stretch and cutting strips with a razor. The grafts are pressed into place and over them are placed thin pieces of gutta-percha tissue, placed so as to allow drainage. Dress with aseptic gauze, moistened with salt-solution, normal (six-tenths of 1 per cent.). At end of forty-eight hours remove all dressings, except the gutta percha, irrigate with normal salt solution, and reapply the dressings. All signs of the graft will then have disappeared.

CORRESPONDENCE.

DR. M. O. TERRY'S REPLY TO DR. ROBERT T. MORRIS IN REFERENCE TO THE TEN CASES ASKED FOR.

GIVING AN ADDITIONAL NUMBER OF TEN AND ALSO REPORTING AS TO THE CONDITION OF TEN CASES OF APPENDICITIS OPERATED UPON BY SURGEONS IN THE CITY OF UTICA, N. Y.

In reply to the queries of Dr. Morris in THE MEDICAL TIMES for March, 1899, I quite agree with him that he is entitled to hear from the ten patients, and it will be of interest to the profession and, possibly, to laymen, to read this report.

Instead of the ten cases which he has asked for I am able to state that within the last two weeks I have heard from twenty patients who have undergone the oil treatment for appendicitis. It gives me pleasure to state that there have been no deaths so far as my knowledge goes and no operations performed in any cases previously under treatment. It will be strange, indeed, if what Dr. Morris expects does not occur in some of the cases in the future, as mistaken judgment in given cases may lead me to delay when operations should be performed, when just as logically, operations are performed when they ought not to be by those operating in most cases.

Dr. Morris states:

"It is to be presumed that some of these ten patients have died or have subjected themselves to operation. Nearly all of them have probably suffered exacerbations of infection by this time, and it will be an important contribution to science if we can learn how the ten patients have fared to date."

In THE MEDICAL TIMES for March, 1899, he has made other statements in connection with the request for the ten cases, which may properly be referred to in THE MEDICAL TIMES for November, 1897, January and April, 1898. This will, to some extent, prevent reiteration, as the reading of these references will bring fresh before the minds of those interested in the discussions which have occurred heretofore, the logic of the "oil treatment" and the answers to Dr. Morris necessitated by his way of putting things.

For the brief histories of these ten cases see MEDICAL TIMES for April, 1898:

CASE 1.

The name is given in full and in this case the residence is the same—New York City. I cured him by instructions sent by letter as to the use of the oil and as to diet. This case had been diagnosed as appendicitis by New York surgeons and an operation insisted upon. The patient is now absolutely well; has never been sick since he was under treatment; time, five years. The following is a synopsis of a letter received by me:

"MARCH 20, 1899.

"DEAR SIR—Five years ago in February had the attack and no signs of it since. If you saw me then and now you would not believe it, but I am very careful what I eat; no peanuts, no bananas, no hard boiled eggs, no clams, and whenever I see the oil bottle I do not pass it by but take a good swallow for friendship's sake.

"Yours truly, CHARLES A. J. RUDOLPH,
"50 Broadway, New York City."

CASE II.

Rev. Newton W. Calwell. I append his letter.

"PRESBYTERIAN CHURCH, WESTFIELD, N. J.,
March 20, 1899.

"DR. M. O. TERRY,

"MY DEAR SIR: Your kind letter at hand and contents noted.

"(1.) My attack of appendicitis occurred December 26, 1894. In bed four weeks. Was afterward obliged to remain in a reclining position most of the time.

"(2.) Dr. McBurney and other prominent surgeons and physicians diagnosed my case as 'chronic appendicitis' and positively affirmed that I could never hope to recover without an operation.

"(3.) In July, 1895, my church voted a two months' leave, but I grew steadily worse until September, when I was unable to sit up over two hours each day; could not ride in a carriage or on the cars without considerable pain.

"4.) Was preparing for an operation when a brother clergyman urged me to first visit you, which I did September, 1895. Like Naaman, the Syrian, I had little faith in your treatment; it was too simple.

"(5.) In four weeks was much improved and in three months considered myself cured. I do not think I have ever had a recurrence. I ride and drive in all kinds of weather and go upon hard hunting trips each fall.

"So much fatality has resulted from operations for so-called appendicitis that the 'fad' for indiscriminate cutting is dying out; especially this 'fad' for opening up the abdomen for every little pain in the bowels. Believing that the Lord never made anything without a purpose until further light is given I prefer to keep my appendix.

"Dear doctor, I cannot begin to tell you how grateful my wife and myself feel to you for my seeming complete recovery. As it is, from a position of almost complete prostration, I am able to push the work of a church of 600 members and three missions with comparative ease.

"Yours most sincerely,
"N. W. CALDWELL."

CASE 3.

On March 18, 1899, reply came to me that his son, who had appendicitis in the fall of 1893, had remained perfectly well to date.

CASE 4.

I saw this case within the last week. Patient is absolutely well and has been so since attack, which occurred in the summer of 1895.

CASE 5.

The following is a letter received from Prof. C., dated March 25, 1899.

"MY DEAR DR. Terry: Replying to your first question I have had no further attacks since the one in December, 1897. I had the first attack in March, 1894. My diary shows that I was taken March 3 and that you visited me the first time on the 16th, or thirteen days after I was taken with the first symptoms of the disease. The following summer I rode my wheel 1,125 miles and realized no inconvenience whatever.

"I had no symptoms of return until December, 1898, when I strained myself and took cold during a dumb-bell exercise in our school. This was followed by a second attack, which was quickly relieved by Dr. ——, who used your remedy. Since that time I have been very well and have had no return of the disease. There has been one or two times when I did not feel well that I imagined that it was my side that caused the trouble, but so far as any soreness or pain is concerned I have not been bothered with any such trouble. I shall be pleased to answer any further questions at any time. Very truly yours,

"C. J. C."

CASE 6.

Patient has remained well since date of leaving the hospital.

CASE 7.

Patient has remained well and has had no return of symptoms.

CASE 8.

Patient has remained well and has had no return of any of the symptoms.

CASE 9.

This patient was seen within a week. He has gained about sixty pounds and has had no symptoms for the last two years.

CASE 10.

Patient well; no return of symptoms.

New series of ten cases, simply giving condition now as in previous ten cases, with one exception.

No interval symptoms in any case unless mentioned.

CASE 11.

Mr. A. was at the hospital from June 9 to June 16, 1898. No return of symptoms.

CASE 12.

Miss W.: fulminating appendicitis. In hospital from June 11 to June 29, 1898. Has remained well.

CASE 13.

Mr. H., Park avenue, Utica, N. Y. In hospital from June 14 to June 28, 1898. Has remained perfectly well.

CASE 14.

Mrs. K. On March 7, 1898, I was urgently requested by her sister, who came to my office, to visit Mrs. K., who had appendicitis at St. Elizabeth's Hospital, in this city. She stated that they had had a consultation of seven physicians, and the opinion was given that the outlook was very doubtful even if an operation were performed. She said she had heard of the "oil treatment" and desired me to take the case, and the surgeon in charge was quite willing to transfer the case to me. I at first refused, in view of the fact that she had been sick for a week; that she was seven months enceinte, and it was evident from the number of physicians called in consultation that everything indicated a serious condition. Much against my inclination I visited the hospital, and the surgeon in charge transferred the case to me. I asked the doctor to keep the case and try medical treatment, which he refused to do. I then said, "I hope that you and the surgeons connected with the hospital will visit the case as often as you desire and watch the treatment.'" And they did frequently. I had never seen just that complication, and thought the outlook was serious. On the third day miscarriage occurred, owing, I think, to a starvation diet, and in thirty days the patient left the hospital well. The serious features of this case can hardly be appreciated by the brief details given. When it was stated by the sisters that it seemed like a resurrection; when it was said to the members of the family on the street by the surgeons that she would be dead in forty-eight hours; when it was stated three days later at the hospital by the surgeons that septic peritonitis had developed; that she had tympanites of the bowels; that there was nearly constant retching and vomiting for three days and frequently inability to retain medicine, even all taken together gives but a faint idea of the serious features involved in this very remarkable case. I believe an operation would have resulted disastrously.

This patient is absolutely well to-day and has not had a symptom or a sensitive point in the abdomen since leaving the hospital.

CASE 15.

Mr. H.; in hospital from August 10 to August 17, 1897. No return of disease or symptoms.

CASE 16.

Mr. D.; was attacked July, 1898. No return of disease.

CASE 17.

Miss V. The following is an extract from the answer to my letter in reference to her attack of appendicitis, the party now living in Chicago. The father writes:

"I am happy to say, as I wrote some time ago in this same matter, that Addie, from the time of her sickness at Utica, in 1892, has not had a sick day since, except from a few colds."

CASE 18.

Mr. S.; was attacked with appendicitis and was confined with it from January 12 to January 22, 1898, and has had no return since.

CASE 19.

Dr. S.; was in hospital from September 10 to September 27, 1896, and has remained well to the present time.

CASE 20.

Mrs. R.; in hospital with attack of appendicitis from March 17 to March 24, 1897; no return of difficulty.

It may be interesting to readers of this article to be able to have for their inspection the answers of ten persons who have been operated upon for appendicitis within the vicinity of Utica. The person who obtained the answers was a disinterested one so far as the answers were concerned, and had no interest otherwise than obtaining the truth. I know of other cases, not included in this list, equally unfavorable.

The point aimed at has been to ascertain if the persons were free from pain or had symptoms tending to make life a burden.

CONDITION OF TEN CASES OPERATED UPON FOR APPENDICITIS.

CASE 1.

W. P. Had appendicitis April, 1896, and was operated upon. Has had pain for two years; "it occurs about every time we have a new moon." General health fair; has to take Hunyadi water to regulate bowels.

CASE 2.

J. W. Had appendicitis December 11, 1895. Operation. Had pain for a long time afterward, but does not have it now. Health all right. Takes salts and pills to regulate bowels.

CASE 3.

W. J. Operated upon in 1896 for appendicitis. Returned to hospital on account of a swelling that looked like an abcess, but it went away by poulticing. It seems now to be all right. Takes Hunyadi water every morning.

CASE 4.

E. L. Had appendicitis October 15, 1897, and was operated upon and has a crick in side very often. General health not very good. Bowels troublesome.

CASE 5.

E. F. In June, 1897, patient was operated upon for appendicitis. Has a swelling that bothers him at times and occasionally sharp pain is felt in the side. Health not any too good; fears another operation. Takes pills every day to keep bowels open.

CASE 6.

J. P. Had appendicitis and operation in March, 1897. Has pains at times. General health good except when doing heavy work. Takes something every morning to move bowels.

CASE 7.

J. M. In November, 1896, had appendicitis and operation for the same. Had pains until quite recently in same region but more to the right. Some soreness occasionally. Patient said his general health is nothing to brag about.

CASE 8.

D. A. On the 25th of September, 1897, patient had appendicitis and operation. Pain ceased shortly after operation. Health good and bowels all right.

CASE 9.

L. L. February, 1897, appendicitis and operation. Often has pain. Has it so bad as to be unable to work. Patient describes it as kind of a sharp pain. General health not very good. Claims he is not so well as before the operation on account of annoying sensations. Obliged to take something to move bowels all the time.

CASE 10.

I. Has been operated on twice for appendicitis and its complications. Has a large hernia now. Young man about twenty-five years of age.

In regard to the ten cases which have been operated upon it was, of course, a very difficult thing to procure this report, as I did not perform any of the operations, but the person who procured it was absolutely impartial in getting these verbal statements, and I have no knowledge as to who they are or where they live in Utica or the vicinity, but I believe the answers are correct as coming from these patients who have been operated upon. The reason why I secured these was to offset certain statements

which Dr. Morris had made in the *Medical Record* of May, 1898, on which date he obtained ten letters from patients who had been operated upon and who had received medical treatment. These patients are said to have stated that they have suffered much less under surgical than under medical treatment. Under the "oil treatment" I would like to see Dr. Morris obtain such answers from the patients treated by me, and *morphine* or any *anodyne* is *never given.*

I have mentioned other parts of this article, entitled "Correspondence between a layman and surgeon," on the subject of appendicitis, and have put some questions to Dr. Morris in THE MEDICAL TIMES for April which I hope he will answer in the interest of truth and humanity.

It will be remembered that the doctor has made a statement in THE MEDICAL TIMES for April, 1898, in reference to the diagnosis of appendicitis, that "it is no more difficult than making diagnoses of broken legs." I wish now to offset this statement by referring the reader to an article published in the *New York Medical Journal* for April, 1899, entitled "Errors That I Have Made in 228 Consecutive Cases Diagnosticated as Appendicitis," by Robert T. Morris. It is evident from looking over these mistakes that the doctor feels justified in the operative procedure in view of the fact that of the mistaken cases four of them were promptly benefited. But the truth of the matter is that he has been mistaken in over 3 per cent. of his cases in regard to diagnosis. In the discussions on his paper in the same number of the *Journal* I find that Dr. Joseph D. Bryant, formerly Surgeon General of this State, says, "that anyone who operated for appendicitis was very liable to be mistaken in the diagnosis." Dr. N. E. Brill, in discussing the paper of Dr. Morris, stated that he could say, so far as his experience went, the mistakes which he had encountered had been made chiefly by prominent surgeons.

In a recent book, published on the Hispano-American War, by Col. Nicholas Senn, Chief Surgeon, U. S. Volunteers, and Chief of the Operating Staff with the army in the field, and one of the greatest surgeons living, he states in regard to appendicitis:

"It is somewhat astonishing that, in these days of 'appendicitis rage' of the many thousand soldiers who have landed at Montauk not one case of appendicitis came under my notice that would have justified an operation. We would naturally expect that among such a large body of men, almost all of them at some time during the last five months the victim of intestinal affections, the appendix should have claimed its good share of disease; the climate, the diet, the previous intestinal affections contracted in Cuba, should have, according to our ideas of the nature of appendicitis, combined in exciting the disease. But such was not the case. The profession is well aware of the fact that surgeons who can see nothing but appendicitis in cases in which the patients complain of pain in the right iliac fossa, have performed laparotomy, and these cases were not few in number, where as an excuse for their error in diagnosis, they have completed the operation by removing a normal appendix. Of the three cases of supposed appendicitis sent to the surgical ward, in only one the diagnosis proved correct, and this case was such a mild one that operation was not deemed justifiable. One proved to be malaria and the third typhoid fever."

At Camp Black, L. I., Col. J. D. Emmet, of the Fifth Brigade, N. G. N. Y., stated to me that the only case he had seen of appendicitis at the Hempstead Hospital during the encampment of 1898 had been cured under his instructions by the "oil treatment" after a consultation of surgeons in which it was decided to operate. Dr. Emmet had charge of the hospital, so that his decision was final as to the management of the case.

In conclusion: As I glance backward over the country, I recall the prominent persons, such as the Mexican Minister, who was operated upon last year for appendicitis; Mr. Munro, Senator Tabor and others, who were well at one time, but attacked with this disease, operated upon within three days and the undertaker sent for within five. I wonder if Mr. Leland would have been any worse if after intense anxiety and prostration neglecting his bowels in the meantime, if he had taken a cathartic of castor and sweet oil to start the machinery again and had lubricated the intestinal tract, thus removing the friction and congestion incident to a stasis or a physiological blockade, which some prominent and intelligent surgeons call the colon bacillus!

Add to this query the entire process included in the "oil treatment," of which Dr. Morris has so frankly said in referring to it: "The medical treatment that he advocates is the most excellent that I have ever seen described," and the chances of his recovery in the light of my experience would have been much larger than the surgeon's per cent. of cures.

DISINFECTION OF SLEEPING ROOMS.

HOW THE EFFICIENCY OF CORROSIVE SUBLIMATE WAS DISCOVERED.

From the *Philadelphia Record.*

Professor Konig, of Gottingen, in a recent article on this subject, says that at one time, while he was practicing medicine in Hanau, he suddenly discovered that his bedroom was thickly inhabited by obnoxious insects. A friend assured him that he could easily get rid of the pests, and proceeded to fumigate the apartment with corrosive sublimate. The success of this measure was most gratifying, and when the room was opened the dead bodies of various kinds of insects were seen strewn about the floor. This incident led the professor to hope that the same means would be effectual in destroying the infectious elements of contagious diseases, and a trial in private houses after scarlet fever or measles, and in hospitals after erysipelas or pyæmia, gave most satisfactory results. Since adopting this method he has never seen a second case of a contagious disease which could be attributed to infection remaining in the room in which the patient had been confined.

The mode of procedure is very simple. From one and a half to two ounces of corrosive sublimate are put on a plate over a chafing dish, and then the windows and doors of the room are closed. At the expiration of three or four hours the windows are opened and the apartment is thoroughly aired. The person entering the room should take the precaution to hold a sponge or cloth over the mouth and nose in order not to inhale the vapor. The following day the windows are again closed, and some sulphur is burned, in order to neutralize any of the mercurial fumes which may linger about the furniture and other articles. The room should then be again aired and cleaned, when it will be ready for occupancy.

Zinc Chloride in Chronic Metritis.—Delbert declares that zinc choride is far superior to the curette, which has superseded it, in chronic metritis. It never aggravates inflammation of the appendages as the curette does. It does not necessitate the taking of an anæsthetic and confinement to bed, as the patient, he says, can go about with impunity after its use. A twenty per cent. solution he finds by experience to be the best. If stronger or weaker; it does not answer as well. About a drachm is injected into the uterine cavity, and the vagina at the same time is irrigated with a boric solution or water sterilized by boiling, after which a tampon is applied. At least three injections are needed, using them at first every two or three days and later once a week to once a fortnight. The action of the solution is no more destructive to the tissue than the curette. To use the zinc chloride as a crayon is objectionable, as atresia of the cervix has frequently followed in consequence. None of the patients on whom Delbet has used this treatment has since become pregnant.

Abortive Treatment of Erysipelas.—Dr. Labit (*American Journal of the Med. Sciences*), recommends the use of a ten per cent. solution of iodol in collodion. The affected area is thoroughly painted, and the coat extended for an inch over the healthy skin. If upon the scalp, it is first shaved, then painted. That the iodine contained in the iodol is absorbed, is shown by its appearance in the urine. Frequently within twenty-four hours all symptoms of the disease will disappear. It is not claimed that iodol is the only specific for the streptococcus of Tehleisen; doubtless other antiseptics can produce the same result. The pressure produced by the collodion, and its penetration, carrying with it the remedy into the tissues, are important. The method is not painful, but on the contrary, is anodyne.

MISCELLANY.

—The second Portuguese Congress of Medicine will be held at Oporto in 1900.

—Prof. Roentgen has lately declined a call to the Leipzig University, and for the present remains at Wuerzburg.

—The patient may now take his cod-liver oil in the form of *Pate de Foie de Morue*, which, according to a French paper, is both effective and agreeable.

—A foreign physician asserts that the pain of neuralgia, if superficial, can be relieved by throwing a beam from a bright arc light upon the affected part.

—After applying an adhesive plaster bandage, varnish it over with collodion—a couple of layers. This keeps it from stretching and from becoming dirty and black.

—*Cronica Medica*, Mexico, July 1, 1898, notices the excellent results obtained with calcium sulphide in treatment of cases of diphtheria when the serum treatment has failed.

—Typewriters' cramp has made its appearance as a new addition to the list of occupational diseases. It is similar in its etiology to writers' cramp. It is, in fact, about the same thing.

—Dr. N. Emmons Paine, of the Newton Nervine, West Newton, Mass., has been absent for six weeks, spending the time abroad in London and its suburbs, visiting sanitariums and hospitals.

—General Ludlow reports that in the month of February the deaths in Havana was fifty-one per cent. less than the corresponding month last year.

—Dr. Mendelsohn, of Germany, has been experimenting upon the physics of taste. He states that this sense is strongest between 10 and 20° C., and is weakest at freezing and temperatures around 50° C.

—An automobile has been presented to a Chicago hospital. The vehicle weighs 1,600 pounds, and is capable of a speed of 16 miles per hour. This is probably the first electric ambulance ever constructed.

—The University of Montpelier has just decided to admit women to the examinations for the Doctorate in Pharmacy, which is in future to take the place, in France, of the present title of "First-Class Pharmacien."

—The death is announced of Surgeon-Major John Bowron, in his one hundred and first year. He entered the East India Company's service as a pupil in 1813, and became assistant surgeon in 1825, retiring in 1851.

—The German Reichstag is attempting to deal with the social question in a very emphatic manner. A bill is proposed which will punish by fine and imprisonment any person communicating to another a venereal disease.

—A writer in a German exchange makes the statement that a hypodermic syringe can be boiled without injury to the leather, if the piston and washers are first soaked in a 2 to 4 per cent. formalin solution from twenty-four to forty-eight hours.

—By the will of ex-Chief-Justice John Scott, of Bloomington, Ill., his estate, amounting to about $2,000,000, is to be held in trust for the benefit of his heirs until their death, when it is to go to the city of Bloomington for the foundation of a hospital.

—Emil Behring, together with a Dr. Ruppel, has applied for a German patent for a tuberculosis serum. His claim is: "A method for producing a highly poisonous and immunifying substance from tubercle bacilli, or from cultures of tubercle bacilli."

—The Porous Plaster and Liver Pill Trust is one of the latest combinations to be established, the *Medical Record* says. The enormous amounts involved in the transaction is some slight indication of the number of people who put their trust in such preparations.

—An alcohol thermometer, 70 feet in length, is now being put in place at Winchester, Mass. It will be put in a pit of its own depth and be used for scientific measurements of the earth's surface. It is constructed on the same principles as smaller instruments.

—*Deutsche Med. Wochenschrift* says that unless the bulb is inserted a distance of ten centimetres, the rectal temperature is inconstant and varies with the distance inserted, in children. The difference between the rectal and axillary temperatures is 0.5 to 0.8 degree C.

—As a result of comparison of a large mass of data, Jastrow concludes that men of thought live 69.5 years, or 3.5 years longer than ordinary men, while the lives of men of feeling (*e. g.*, artists and musicians), are three years, those of men of action five years, shorter than those of average men.

—Keep in your nursery bedrooms one or two strong sacks, about three and one-half feet in depth and one and one-half in diameter, held open at the top by a thick wooden hoop, and having a very long, strong rope attached. In case of fire the children may be let down in safety.

—The great telescope for the Paris Exposition of 1900 is said to be making good progress, and it is expected that a magnifying power of 10,000 will be used on occasions, but 6,000 will be the normal. The aperture will be 1¼ metres, or nearly 49¼ inches, the focal length being nearly 197 feet.

—According to Jasiewicz, the immunity from vaccination lasts a much shorter time in infants than is generally supposed. The author, therefore, recommends more frequent revaccination in childhood, and expresses the opinion that children are also protected from other infectious diseases thereby.

—According to the *Journal of Medicine and Science*, a Rhode Island jury recently decided that a dentist must not advertise to extract teeth by a painless process and then rack patients with excruciating tortures. In a suit for damages in a case of this kind, brought by a woman in Providence, the jury awarded the patient $500.

—Mr. Lister, walking his wards with his class twenty years ago, said: "Gentlemen, I have often noticed that bad contusions, not complicated by lesions of the skin, nearly always do well; those with lesions of the skin have trouble. I am not able to explain this, but the one who does will make his name immortal." He explained it afterward himself, and his name is immortal.

—A very remarkable decrease in the number of cases of diphtheria is reported in the town of Trenton, N. J., in the annual report of the State Board of Health. It says the number of deaths has continued to diminish, and only 950 were reported during the year. This is 142 less than in 1897. It is agreed by the medical profession of the locality that the reduction of the mortality is due to the use of diphtheria antitoxin.

—Many of the New York theatre playbills contain the following notice: "Physicians who have patients to whom they may be called suddenly, and who have heretofore remained away from the theatre for fear of being out of call in such cases, can now leave their seat numbers in the box office and be called as quickly as in their office. Ushers will deliver messages to them promptly upon receipt of same over the telephone."

—What is probably the first gastrotomy on a horse was recently performed by a veterinary surgeon of East New York. The stomach was opened for the purpose of removing a silver watch and some coins which had accidentally fallen from a stableman's pocket into the animal's manger, and were swallowed with its fodder. The operation was entirely successful, and it is recorded that the watch continued to go for an hour after being swallowed.

—Aguinaldo is said by the *British Medical Journal* to have been at one time a medical student. He is a half-breed, born at Cavite, and was in boyhood in the service of a priest, who gave him some education. At the age of fifteen he entered the medical department of the Pontifical University of Manila, and afterward studied at the Victoria College, Hong Kong. He was remarked for his ability as a student, but it is not known whether he was ever graduated in medicine.

—London can no longer lay claim to being the healthiest of European cities. Ten years ago the death-rate was 19.9, and in 1898 it was 17.2. During this period the death-rate of Rome, which ten years ago stood at 22.6, has been reduced to 16.9, and that of Berlin has fallen from 20.4 to 17.7. Amsterdam has the lowest record of any, having in ten years fallen from 20.2 to 15.8. Ten years ago Stockholm had the same death-rate as London, but instead of a reduction of 1 per 1,000, there is an improvement to the extent of 3 per 1,000, and to-day the figures stand at 16.7. Brussels has fallen from 20.2 to 16.6, and Copenhagen from 20.5 to 17.5, in the same period.

ORIGINAL ARTICLES.

POINTS IN THE TREATMENT OF VARIOUS CONDITIONS IN THE FEMALE.—1. THE TREATMENT OF SIMPLE URETHRITIS IN THE FEMALE.—2. THE MANAGEMENT OF EARLY ABORTION.—3. THE TREATMENT OF URETHRAL CARUNCLE.

By Robert C. Harris, M.D., Philadelphia.

THE TREATMENT OF SIMPLE URETHRITIS IN THE FEMALE.

WHENEVER it is possible the urethra should be washed out several times a day. Skene recommends the use of hot water, and this is accomplished through the use of a double catheter. Then after washing with the hot water some application may be made, such as iodoform, silver nitrate, zinc sulphate or copper sulphate. In my experience nitrate of silver seems to be efficacious. The question arises as to whether we should use a weak solution once or twice daily, or a strong solution less frequently. I believe this selection depends on the stage of the inflammation entirely.

If we use the strong solution of silver nitrate, 60 to 80 grains to the ounce, we should put it in with an applicator; distending and swabbing the part through its whole length. It is well to rub it up and down, but never carrying it back again, using instead a new applicator. After doing this three or four times, dry and make a final application. If this process produces whitening of the tissues we will carry in salt water as wash it is well to remember that the contraction of a cicatrix after the application of silver nitrate is apt to cause trouble.

Iodoform is a very excellent application in inflammations of the urethea. It is so unpleasant in its odor that in private practice we do not like to use it. It can be deodorized, we should always remember, by oil of cloves or antipyrine. And that suggests that antipyrine itself, with a strength of 20 grains to a half ounce of glycerine and water, is a nice application for this inflammation. A good deodorizer for iodoform is finely pulverized coffee. But I do not like to use the deodorized iodoform.

Chronic urethritis is obstinate and difficult to treat. Some writers state that it is always the result of gonorrheal infection. But I am not at all ready to say that. There are undoubted cases where it follows from exposure to cold.

The treatment consists in rest, hip baths, great cleanliness, saline purgatives for the bowels, and astringent injections into the urethra; heat is often very comforting, cold sometimes more so. As astringents, alum and sulphate of zinc may be injected by the patient herself by means of a little glass syringe. Of internal remedies, copabia is the best. Flaxseed tea may be given and the patient should have plenty of fluid.

The treatment of chronic urethritis is especially difficult when the walls of the urethra have become thickened from inflammation. Silver nitrate may be sometimes powdered and diluted with sugar then blown into the urethra. Some solution, or some strength of silver nitrate is especially valuable in ulceration. Dilute iodized phenol, or carbolic acid in its purity may be applied on the ulcers if care is taken not to touch the healthy tissue. Pure carbolic acid may be used once a week, or once in ten days, for two or three applications, always being careful to protect the vulva, whatever application is used. The cicatrix from silver nitrate contracts and is almost as bad as a cicatrix from a burn.

THE MANAGEMENT OF EARLY ABORTION.

Having made up your mind that the abortion is inevitable there are two methods open to the practitioner. The first is of course the one in which the patient is allowed to go on with no interference and you permit nature to manage the case in her own way. In many cases the patient and her family insist on this plan of treatment and the practical man must decide whether it is for the best interests of the patient to permit this to take place. But in my experience it is better to remove at once the ovum and clear out the uterine cavity. This active treatment naturally divides itself into the questions whether the ovum shall be removed at once or whether you should wait for dilatation.

The determination of this question depends in my opinion on the condition of the patient. If you are called to a patient who exhibits serious symptoms and has had considerable hemorrhage there is a disturbance of the circulation; she is nauseated and possibly on the verge of a collapse; your judgment may suggest one line of treatment. If, on the contrary, there are no such symptoms and there is sufficient dilatation, remove the ovum at once. If no dilatation, then dilate. In the first case, after making an examination you find the dilatation is not sufficient, she would die were you to subject her to operation. You may then plug the canal with gauze, never plugging the lower two-thirds of the vagina, and part of the plug must go up into the cervical canal. Then give her stimulation, liquid to fill up her vessels and carry on the circulation, coffee injections into the rectum, aromatic spirits of ammonia, and all the measures you can use to restore her. You will now allow the tampon to remain twelve hours, then you will find enough dilatation.

Go on to the case where you have no such alarming symptoms. You find a portion of the ovum protruding from the orifice. Your only danger is in mistaking it for a polypus. Inversion of the uterus is so rare that it is hardly to be considered. When you come to the ovum it gives a peculiar sensation; it is a rough body. All you can do is to scoop it out. Remember that all septic diseases are very frequent after abortion, and if there is any odor use bichloride freely. Your patient may not tolerate well the manipulations, and there may be difficulty in carrying the finger into the uterine cavity. An anesthetic will then aid you vastly and relax the abdominal wall.

Part of the ovum then is outside the uterus. Pass your clean finger beyond this shaggy mass. If you tear off part of it you will have left a piece which is exceeding difficult to remove, so you must get at whatever portion is attached, which is usually you know near the openings of the oviducts, or any-

where in the upper part of the uterus. If the whole thing is loose, hook it out. For the removal of the placenta you should use the finger as much the best curette, examining all around the surface of the uterus and rubbing off any rough places with the finger. The decidua, always a very thick membrane, you will have to treat as a distinct consideration, and the best management of it is undoubtedly the use of the curette. This should be a blunt instrument and a large one, one which cannot readily penetrate the uterine wall. It must be used over the entire surface and from above downward; at the same time your hand over the abdomen teaches you that you are not using too much pressure. The curette is passed through the uterus so often and even with a healthy uterus you are constantly hearing of such accidents. I think it is much better to use the finger when possible.

If there is odor, a sign of sepsis, it is better to wash out the cavity and drain. A simple piece of straight gauze carried down the cervical canal makes a good drain. For washing out I like to use the glass tube; it is an exceedingly clean tube. The stream should never be of any great force, on account of the danger of entering the opening into the tubes; and again the force might be sufficient to rupture the uterus. The water should be not over twenty-five inches above the level of the bed; and usually twelve inches is high enough.

We will suppose the patient in a worse condition. There has been severe hemorrhage and you cannot hope to get sufficient dilatation from plugs of gauze. The patient is quite anemic, so that no time should be lost in operation. Then we shall resort to a rapid dilatation, not by the old method of tent dilatation, but using the metallic dilators.

The stage after abortion is characterized by slow involution. It is a question, you know, whether the uterus ever really returns to its normal size. The return is certainly much slowly than after a regular labor, and the patient should lie by much longer than after labor. I usually get her to promise that she will lie by as long as the flow continues.

In order to reduce the size of the uterus she may be treated with hot water vaginal douches, applications over the abdomen, ergot in rather small doses —you are to continue the treatment for weeks. As to the breasts, it is very rare to have trouble from them at abortion before four months, and before that time I usually let them alone. After abortion, treatment should ordinarily be directed to the endometrium. Advise your patient strongly about it, that it may not be a cause for repeated abortions.

THE TREATMENT OF URETHRAL CARUNCLE.

The chief symptoms of these angiomas are sensitiveness to the touch, difficulty on micturition, pain on walking and sitting, and pain immediately after passing water. These same symptoms are sometimes remote and indefinite. These angiomas of the urethra often excite reflex symptoms, which are referred to the pelvic organs. Even if they themselves are not sensitive, we cannot help but feel that they are a source of irritation and inflammation, so that if we see one of these growths I think we are in duty bound to advise the patient to have it removed.

They are sometimes taken for vaginisunes. The patient may have no pain, and she is unconscious why there is a sudden stopping of the urine. But the act of micturition is interrupted, and what have we? Retained urine, which may become turbid and foul, being residual in a measure, and systitis may follow. Bleeding is not uncommon; but it seldom amounts to much and can be easily controlled. Very often the vessels are greatly distended, and it is rather remarkable that there is not more bleeding.

As to the nerve supply of these, opinion differs. Some claim to find a large nerve supply; others state there is none. As they are as a rule quite sensitive, there must be some nerve supply.

The prognosis is good. They are easily removed. But let us never say to a patient, "It will never return." They are not likely to be produced again.

The extirpation is accomplished by knife or scissors, by the eraseur, cautery, caustics, curette or ligature. You simply lose your reputation if you attempt to remove the growth by caustics, a painful and prolonged process. Last and least is the ligature. I should never want to put a patient to the torture of removing by ligature. On some occasions, when ether cannot be given, we may benumb the sensation by a 10 per cent. solution of cocaine, injected fifteen or twenty minutes before the operation. Then a double ligature may be passed through and tied in two sections. In such cases only would I be willing to use the ligature.

The excision by knife is better, I think, than by the scissors. If your hand is unsteady, rest your arm somewhere while you hold the long handled instrument. The cutting is often followed by the thermo-cautery. But I would rather do away entirely with the thermo-cautery in removing these structures. Put in some sutures with fine catgut. Hastening of the convalescence is worth considering, and you aid this if you sew up the wound. You can cover it with mucous membrane, and you have plenty of it to use.

The curette is an uncomfortable way of treating them. The selection of the method depends of course on the circumstances, but I have given you the method I prefer; drawing down, cutting off and sewing up. We may use a combination of the methods. Remember that cauterization leaves a surface that is rather longer than usual in healing.

It is well to make an examination of the whole length of the urethra, which can be done by Sims' urethral speculum. As a rule, these tumors are accessible. I think we find more often they are on the anterior wall. If they are on a broad base they are apt to be hemorrhagic.

ERYSIPELAS.

By E. Franklin Smith, M.D., New York.

ERYSIPELAS is an acute infectious disease, characterized by its tendency to involve the skin and cellular structures, to extend along the lymphatic vessels, to involve wounds and injuries under certain conditions, accompanied by more or less fever of septic type, leading frequently to septic disturbances of profoundest character, yet tending in

the majority of instances to spontaneous recovery. The erysipelatous inflammation is, in reality, a specific progressive lymphangitis, the paralymphatic tissues becoming affected by contiguity.

Varieties.—(1) Simple cutaneous erysipelas; confined to the skin; suppuration rare. (2) Cellulo-cutaneous erysipelas, or phlegmonous erysipelas; skin and cellular tissue involved; suppuration frequent. (3) Cellulitis; suppuration the rule. The streptococcus of Fehleisen never produces suppuration.

1.—SIMPLE CUTANEOUS ERYSIPELAS.

Seat.—Every case of erysipelas is traumatic, in so far that by injury or disease the necessary infection-atrium must be created through which the streptococcus can reach the lymphatic vessels; therefore it is specially prone to attack the exposed parts, the face in particular, where scratches or abrasions often exist.

Etiology.—The infectious organism is a streptococcus, often called after one who studied it, Fehleisen's coccus.

Predisposing causes: Overcrowding, bad drainage, intemperance, starvation, debilitating diseases, and the extremes of life.

Incubation Period.—Eight hours to eight days.

Symptoms.—Local: (a) objective; (b) subjective.

(a) Objective local symptoms: Redness of the skin, rapidly spreading; its most characteristic appearances are limited to the margin of the enlarging zone, while at the same time in its center there may be evidences of recession of the disease. The skin is hot to the touch, and there is swelling and œdema, which pits on pressure. The surface is studded with vescicles, filled with a turbid serum, The lymphatic glands which drain the affected area are swollen, tender, and inflamed.

(b) Subjective local symptoms. One of the most characteristic of these is the intense irritation, smarting or burning pain, to which is given the name of "St. Anthony's Fire."

Symptoms.—Constitutional. There is usually a period of malaise, with nausea, followed by alimentary disturbances, coating of the tongue, elevation of temperature, with or without the occurrence of chill. Delirium is frequent, which is worse at night. The symptoms are those which accompany inflammations, *plus* adynamia. Drunkards are likely to develop delirium tremens.

Duration.—An ordinary attack seldom lasts less than a week or more than a fortnight.

Termination.—A fatal ending is to be apprehended when the strength fails, the respirations become quick and shallow, when the pulse is feeble, the tongue dry, the mind obscured, with muttered delirum, or when stupor and coma supervene, with the involuntary passing of urine and fæces. A scanty flow of urine loaded with albumen is of grave import.

Complications.—Among the local complications may be mentioned suppuration, ulceration, sloughing, gangrene, lymphangitis, lymphadenitis, phlebitis, neuritis, periostitis and necrosis. When the organs of sight, smell, or hearing are involved they may be impaired or their function destroyed. Pyæmia is a frequent cause of death. Acute nephritis is a frequent complication, occasionally ending in a fatal uræmia. Croupous pneumonia is a dangerous complication.

Prognosis.—In the simple cutaneous form it is favorable. Prognosis depends largely upon its degree. Infants and the aged are apt to succumb. The mortality given by various authors varies much, the average being about 11 per cent.

Diagnosis.—This is to be made from the various forms of erythema, from certain drug eruptions, and from other forms of septic infection which do not assume the clinical type of erysipelas. The gradual spreading redness and swelling of the skin and the accompanying fever are so characteristic there can scarcely be any confusion.

2.—CELLULO-CUTANEOUS ERYSIPELAS.

Symptoms.—Constitutional: They are the same in kind but are more severe than in the cutaneous variety. Severe and repeated rigors are the rule. Temperature is high. The pulse and respiration are increased. Delirium is common. There is insomnia and great restlessness. Complications are more frequent. It usually runs an asthenic course, with rapid and feeble action of the heart, quick and shallow respiration, diarrhœa, muttered delirium, with subsultus tendinum, and the formation of sordes and of aphthous patches about the mouth and pharynx.

Symptoms.—Local: One of the chief local symptoms is suppuration. Sloughing, ulceration and gangrene are frequent complications. The skin at first is a deep, dusky red, soon becoming marbled. There is great swelling and œdema. Bullæ form, filled with blood stained serum. The affected area is hot, and is the seat of intense, throbbing pain. The sub-cutaneous tissues become infiltrated with a yellow fluid, which becomes purulent, and the skin is separated from the deep tissues by tissues soaked with thin pus, which interferes with the nutrition and leads to sloughing and gangrene of the skin. The pus formed has no tendency to point, but diffuses itself along the cellular planes.

3.—CELLULITIS.

Streptococci are also the cause of diffuse cellulitis, although it may be caused by other forms of infection.

Symptoms.—There is a profounder disturbance in this variety, and the absorption of septic material is greater, and death more often from sapræmia, septisæmia, and collapse than in the cellulo-cutaneous form. The changes in the cellular tissues are the same.

Behavior of the Wound in Erysipelas.—Repair ceases and its surface becomes dry and glazed. Granulations become anæmic and cease to grow, and may disappear. Hemorrhages may occur, and a layer of ashen lymph, sometimes called "wound diphtheria," may form.

The Healing Effects of Erysipelas.—It has been noticed that new growths, particularly those of a lupoid or syphilitic nature, with or without ulceration, and tumors, such as sarcoma and carinoma, may permanently disappear through the influence exerted by an intercurrent attack of erysipelas.

Babtchinsky discovered that the microbe of erysipelas is a direct antagonist to the virus of diphtheria.

Treatment of Erysipelas.—Isolation should be strictly carried out, particularly in hospitals. A practitioner in attendance upon a case of erysipelas should not attend cases of confinement. The disease is self limited, and a large majority of the cases get well without any internal medication. Give a nutritious and light diet. Stimulants are needed in the young and old. For the restlessness, delirium, and insomnia, chloral or the bromides may be given; or, if these fail, opium. If temperature be high, bath, or sponge the patient. Internally, the tincture of the chloride of iron is recommended, in doses of one-half to one drachm every three or four hours.

Local Treatment.—Hueter recommended parenchymatous injections of a 2 to 3 per cent. solution of carbolic acid at the margins of the inflamed district

It is possible that injections of a 1 to 1,000 solution of corrosive sublimate in non-toxic cases would do good (Senn).

Estlander recommends sub-cutaneous injections of morphine, particularly when combined with a daily painting of the diseased area with tincture of iodine.

Lücke and others have used inunctions of turpentine, rubbed into the diseased area two, three or five times daily with a brush or cotton.

Heppel recommends painting the borders of the diseased area with a 10 per cent. solution of carbolic acid, covering a portion of the skin two inches wide all around the diseased spot.

Creolin	parts 1
Iodoform	" 4
Lanoline	" 10

Make into an ointment and cover the diseased area. (Koch & Mracek).

Kühnast recommends multiple scarifications and incisions, followed by irrigation with a 5 per cent. solution of carbolic acid; also, to apply to the diseased area compresses wet with a 2½ per cent. solution of carbolic acid.

Kraske recommends multiple incisions around the area, to be followed by compresses wrung out of sublimate solution.

Wölfler has prevented the spread by mechanical compresses, produced by placing strips of adhesive plaster around the borders.

Resorcin (or naphthaline)	parts 5
Ichthyol	" 5
Mercurial ointment	" 40
Lanoline	" 50

Anoint the parts with this ointment, cover with oiled silk, envelop with a light dressing and bandage. (Roswell Park.)

Acid carbolic	ʒ j
Alcohol	
Aqua	aa ʒ iv

Apply by means of cloths wrung out of this solution frequently. (James C. White.)

Perhaps as good a local application as any is cold water, which was highly recommended by Hippocrates. (Osler.)

Higgonbottom recommends nitrate of silver solution (one part to three), which is applied after thoroughly cleansing the part, "two or three times on the inflamed surface, and beyond it, on the healthy skin, to the extent of two or three inches."

DaCosta recommends pilocarpine internally.

℞ Collodion flex	ʒ j
Terebinth	♏ xxiv
Ol. ricini	♏ viij

M. S. Paint the part with this. (Roth.)

℞ Thymol	gr. xv–xxiv
Ol. Olivæ	ʒ iij
Aq. destillat	ʒ iij

M. S. A lotion to be applied on compresses. (Roth.)

The treatment of the complications, particularly the abscesses, gangrenous processes, etc., should be conducted on principles laid down for these conditions.

THE MANAGEMENT OF THE CONVALESCENCE OF TYPHOID FEVER.

By William C. Lewis, M.D., Philadelphia.

WHEN the typhoid fever patient is convalescent, then as a rule is the time that the attending physician's trouble begins. The patient demands food and it is hard to resist the demand. The physician is often tempted to stay away from his patient for a day or two, simply in order to avoid again discussing the question.

You can tell your patient that milk is a "solid food," for it is rendered solid when it reaches the stomach. But in the estimation of the patient, milk counts for nothing at all. The time for commencing other food can be lengthened by giving the patient milk in a solidified form, such as "junket" or rennet. Then, again, some authorities regard gelatine as a food in convalescing typhoid fever, not that it has in itself especially nourishing properties, but because experiments seem to show that a patient can get along with less albuminous food if they take at the same time gelatine.

The transactions of the French Gelatine Commission are of interest in this connection. In 1802 the first Gelatine Commission was appointed by Napoleon to determine the best food for feeding the French army, with an idea to cheapness and efficiency. The French had no "embalmed beef" to recommend, so this commission reported that gelatine was the most nutritious part of the beef; that from one pound of bones, nourishment equal to six pounds of beef could be extracted. Bone buttons and bone ornaments were condemned as the stealing of that amount of food from the poor. But in practice it was soon determined that gelatine was not what was claimed for it. In 1842, another commission was appointed and they reported that there was absolutely no nourishment at all in gelatine, but in 1872 it was proved that gelatine, while not exactly nutritious, yet was an albumen-saving food. This is one kind of food needed in typhoid fever and during convalescence. It can be given with peptonized milk.

There have been cases of perforation of the bowel following the ingestion of food after the temperature has been normal for a week, but they are very rare; however, the fact should be remembered by the physician. The question of the establishment of convalescence in typhoid fever is the occurrence of a normal temperature on two successive evenings, the morning temperature being normal or subnormal at the same time.

A fall of temperature does not always indicate that the febrile stage is over. It may follow the occurrence of hemorrhage and perforation, and may therefore be the announcement that some grave accident had befallen the patient. It is rare, however, that convalescence in typhoid fever is preceded by an abrupt defervesence, and if the lysis of the disease does not in all cases possess quite the typical character assigned to it by Wünderlich, it is usually sufficiently distinctive to enable us to recognize it when it occurs.

A peculiarity of the temperature is its extreme susceptibility, and hence very considerable elevations of it may result from causes which in health would have no influence upon it. Accompanying the fall in temperature there is usually a decided diminution in the frequency of the pulse, which in some cases runs as low as thirty-five. This association of an infrequent pulse with a sub-normal temperature is almost peculiar to the convalescence of typhoid fever, and is generally sufficient, in connection with the appearance of the patient, to enable us to recognize—if we should see him for the first time in convalescence—the nature of the disease from which he has suffered.

Like the temperature, the pulse, under the influence of slight causes, often undergoes a marked increase. It is sometimes full but compressible; at other times it is both feeble and frequent, and continues so until complete restoration to health has taken place. It occasionally retains the character of reduplication, which it possesses during the febrile stage.

The appearance of languor and feebleness in convalescence, together with great pallor of the face, is common. The extremities, however, on the contrary often present a slightly cyanotic hue, in consequence of the want of vigor in the circulation. As a result the patient not infrequently looks sicker at this time than at any time previously; especially, also, as emaciation becomes now more prominent than before. The pallor is not, however, always of long duration, and as the alterations of the muscles and other organs are greater and less readily repaired than those of the blood, the patient may soon present the appearance of greater strength than he really possesses, so that his friends sometimes urge him to undue exertion.

Even the physician is prone to overlook the dangers of convalescence which still threaten the patient, while it is often difficult to persuade the friends of the latter that these exist at all. To a certain extent this incredulity is justified by the difference of opinion which prevails among the physicians as to the management of the stage of convalescence. While Collie on the one hand cautions us against allowing the patient solid food until he has been free from fever for from ten to fourteen days, and against allowing him to sit up for more than half an hour twice daily during the first week of convalescence, and tells us that the feelings of the patient are dangerous guides at this time, Austin Flint, on the other hand, expressed the opinion that it is a good rule to let the patient have solid food as soon as he himself desires it, and Peabody recommends us to give it immediately on the disappearance of the fever. Flint, it is true, in his "Treatise on the Practice of Medicine," lays down certain rules for the administration of food, which modify very materially the opinion just quoted, as for instance, that "the patient should be restricted to plain, wholesome, well-cooked articles of diet," and that "excess may be avoided by taking food at shorter intervals than in health," and that "care with respect to much muscular exertion is important in convalescence from typhoid fever, in consequence of a liability to perforation of the intestine," and Peabody recommends that the meat should be cut up very fine and given in small quantities at a time. A similar, though less decided, divergence of opinion exists among other authors. Thus, Murchison and Wolsin restrict their patients to milk, eggs, farinacious custards, light puddings, beef tea, chicken tea and calf's foot jelly for seven days after the cessation of pyrexia, and for a longer time if there are signs of intestinal irritation. Watson, Tanner, Wood and Bristowe give similar directions. Geissler allows solid food at the end of four or five days. Jaccoud recommends the administration of grilled meats in small quantities when the febrile cycle is terminated, although he admits that it gives rise to a recrudescence of fever, which he terms febris carnis; and Nothnagle gives solid food as soon as two or three days after the disappearance of fever, sometimes even allowing meat before this has taken place, in cases in which the patients are very low; and Cayley does very much the same thing, founding his practice upon the fact that a boy recovered whose mother removed him from under Dr. Cayley's care rather than allow him to be, as she thought, starved.

My own experience has been in accord decidedly with those who have found a too early return to solid food prejudicial to the speedy recovery of the patient, and I have long since come to agree with Sir Thomas Watson that the management of the convalescence of typhoid fever is scarcely less important than that of the fever itself.

It is certainly not less difficult. A part of this difficulty arises from the impossibility of convincing the patient's friends that his voracious appetite cannot be fully indulged in without danger. My own custom has been to continue the administration of milk, which forms the almost exclusive diet of my patients in the febrile stage, in cases in which it is well borne—and there are few in which it is not—for three or four days after the occurrence of normal evening temperatures, with the addition of animal broths. At the end of this time I give eggs (soft-boiled), the juice of rare meat, milk toast and other farinacious articles of food. At the end of a week the soft part of oysters and fish are added to this dietary, and at the end of ten days the light meat of chicken, and at the end of two weeks, butcher's meat. All these articles of food are given

in small quantities at a time, but may be repeated at first once or twice, and later oftener during the day. If milk be given in sufficient quantity—say six ounces every two hours—it will fully meet the wants of the system. The only objection that can possibly be urged against this plan of treatment is that the continued use of milk is tiresome to the patient and that it produces constipation. The first objection is of little moment, if there are dangers attending the administration of other kinds of food, it may be obviated by giving, after the first few days, at the same time with the milk, some of the farinacious articles of food which will make it more acceptable to the patient, and will at the same time prevent, to a certain extent, its tendency to produce constipation.

Closely allied to the subject of the regulation of the diet is that of the administration of alcohol. As I do not think it necessary to give stimulants in all cases of typhoid fever during the febrile stage, so I believe that there are many in which it can be withheld with perfect propriety during that of convalescence. On the other hand, it occasionally happens that they then become for the first time necessary. There is no doubt, moreover, that recovery is often hastened by their judicious use. I should therefore be influenced by the same reasons in giving them during convalescence as have guided me at an earlier stage of the disease; to wit, the condition of the pulse and the heart, the degree of general prostration, and the presence or absence of ataxic sypmtoms. In a moral point of view it is better not to give them, if it can be avoided, to very young persons who have been previously unaccustomed to their use, and in all cases if possible to discontinue them before the patient passes from under the care of the physician. Port and sherry may often be substituted for the stronger alcoholic liquors at this time with advantage, and so may the lighter wines. The malt liquors will often be acceptable to the patient, and may be resorted to in cases in which they are not contra-indicated. Huxham's tincture has always seemed to me a useful tonic at this time. Other tonics may also be prescribed with advantage. If the patient is anæmic one of the milder preparations of iron—the lactate, for instance—will often expedite the recovery. In cases in which the digestion is sluggish, tincture of gentian before the principal meals, and pepsin, with muriatic acid, have often proved of service in my hands.

When the case of typhoid fever has been severe, the patient should maintain the recumbent position for a week at least after the beginning of the convalescence. He should not be allowed to leave his bed even to pass his water or to have a movement of the bowels, and in cases in which the prostration is extreme, even to sit up in bed to feed himself. That these rules are not too stringent is shown by the buzzing in the ears, the dizziness, the vertigo, faintness, and even fatal syncope which have followed voluntary movement, and by the staggering and uncertain gait when the patient attempts to walk. At the end of a week he may be allowed to sit up for half an hour, and the next day for a longer time, if the act may be repeated; in this way being accustomed and encouraged to make a little more exertion each day. Usually, however, anxious as he may have been for the privilege, he is at first willing enough to return to his bed at the end of the prescribed time, having learned by experience how little strength he really possessed. As soon as the patient's strength will admit of it he should be removed to an adjacent room. This often has a very good effect, for not only does it permit his room to be thoroughly aired and cleansed, but the change is often agreeable to him, and seems, as it is, a decided step forward in the progress of his recovery. Exercise in the open air is to be encouraged as soon as the patient's strength will permit his going up and down stairs, and even before this if the patient can be carried.

Driving is also useful when the patient is sufficiently strong enough to enjoy it. The patient is more emotional in convalescence, and is much more readily moved to tears than in health. He should therefore be carefully guarded against all exciting or depressing influences. I have known a severe relapse apparently induced on the eighth day of convalescence by the communication to the patient by her husband of the news of the death of a child. A slight rise of temperature was noted the same evening; this was followed by a daily increasing temperature until 106 degrees Fahr. was reached, on the seventh day of relapse, then by epistaxis, tympany, rose-colored spots, sudaminia, and in fact by all the symptoms of a well-marked attack of typhoid fever.

The patient should not be allowed to have too many visitors at this time, and only those should be permitted to see him who are possessed of sufficient judgment not to excite and fatigue him by referring to business matters or to topics which are disagreeable to him. After visiting-days at the various hospitals it is not infrequently found that the patients who have had visitors present evidences of recrudescences of fever of more or less gravity.

In short, the care of the convalescence of typhoid fever is frequently as important and more troublesome than the treatment of the febrile condition itself.

MEDICAL TREATMENT OF VARICOSE ULCERS.

By G. A. Heidner, M.D., West Bend, Wis.

ALL varicose ulcers are curable, and nearly all of them are curable without resorting to any radical surgical measures. In my practice during the last ten years I have treated a good many cases of varicose ulcers in middle-aged and old people, some of them having been previously treated by many physicians, both regulars and irregulars, besides the almost numberless applications which had been suggested by kind neighbors, and I will frankly confess that these, more than any other class of curable patients, have tested my ability to hold them long enough to get the desired result. When dealing with one of these chronic and discouraging cases, unless you can get the confidence of the patient and have the unrestricted management of the case for a sufficient time, you will save yourself trouble, and deprive the patient of a great opportunity to say unpleasant things about you, by having nothing to do with the case.

Our textbooks on surgery and dermatology treat this subject in a general way, outlining the fundamental principles which govern the treatment. These suggestions are very good as far as they go. It is necessary, however, to go into the minutest detail in the application of these principles or we will meet with many dismal failures in practice. The patient must be made to feel the importance of carrying out the treatment in all its details. This accomplished, more than half the battle has been won. You can readily see the force of this statement when you consider that in the country, at least, most of the actual treatment is done by the patient.

Now, let us consider a few of the principles that must govern the treatment in every case of ulcer that is dependent upon varicose veins for its existence. First, the vessels of the leg must be supported, and, second, the ulcer itself must be stimulated. Without these the reparative process cannot take place. It would be a comparatively easy matter to cure a large majority of these ulcers if we could get the patients to go to bed for three or four weeks. In fact, I believe many would heal without any treatment, except simple cleanliness. Unfortunately, however, most of these ulcers occur in elderly people who are found in the humbler walks of life, and either from circumstances or from a disposition to move about, it is impossible to keep them off from their feet. With these patients we are obliged to devise means to support the venous circulation while they are moving around, doing their ordinary work, and in my judgment our success or failure in each individual case can be predicted by the manner in which this part of the treatment is carried out.

Given a case, we first determine the condition of the circulation in the limb, *i. e.*, swelling, pain, a heavy feeling, etc., then the condition of the ulcer itself, whether active and granulating, or foul and indolent. These are the factors which determine the treatment, regardless of the duration of the case. In every case with swelling of any consequence, I deem bandaging absolutely indispensable, unless the patient can be induced to keep the foot elevated to allow the blood to gravitate toward the body. By bandaging I mean supporting the circulation, not merely a bandage to retain the dressing in place. I prefer the woven web elastic bandage, about two and one half inches wide, of medium weight. In mild cases a flannel bandage cut bias, about the same width, answers very well. I have entirely discarded the elastic stocking except for after-treatment. The most valid objection to a stocking of this kind is that it never fits the case, even if it should fit the leg. By that I mean that when the stocking is new it causes more pressure than the patient is able to bear, and later, when a greater degree of pressure could be endured—and is desirable—the web of the stocking relaxes, and exactly opposite to what we are aiming at occurs. Too much care cannot be observed in applying the bandage. For the average case a bandage twelve feet long is sufficient. In applying it, begin at the ball of the great toe and make successive turns around the foot until the malleoli are reached, then take one turn around the leg above the ankle, coming back over the instep to make one more turn to cover the ankle as completely as possible, after which continue the turns around the leg until the knee is reached, using first the simple spiral, then the reverse spiral, and finishing with the simple spiral turns. When properly applied, the web bandage is not very apt to slip. I usually lap the bandage about one half of its width in each successive turn, exercising the utmost care to obtain equal tension throughout its entire length, so as to completely support the veins and prevent œdema. Never forget to demonstrate every detail of this part of the dressing to your patient at the first consultation, even if it should be necessary to apply it yourself several times. Also insist on it that it must be worn constantly day and night, or put on the first thing upon rising in the morning, should the patient prefer to wear some more simple bandage during the night to retain the dressings.

As a result of improper treatment or uncleanliness, many of these ulcers are presented to us in a very foul and indolent condition. The surrounding integument is covered with a profusely weeping eczema, which has kept the patient in misery perhaps for weeks or months, and for the relief of which our help is sought often more especially than for the ulcer itself. Allow me to digress here and say that some of these patients will tell you that they do not care to have the ulcer healed, because Mrs. Brown had one healed last year and she died. Formerly the profession taught that doctrine, but they do not accept it now. I wish to record myself as one who believes that we have here a good opportunity to render our patients much more comfortable, and prolong their lives as well, by curing their infirmities. Our ability to hold the patient long enough to treat the ulcer successfully, depends largely upon our success with the eczema.

Given a case, the first thing to be done is to clean the base of the ulcer as thoroughly as possible, with good soap and water if necessary. If it is indolent apply tincture of iodine, or some other mild caustic on a small wisp of absorbent cotton. Wipe it dry and apply a little of the following powder: Calomel, iodoform, and acetanilid, equal parts. This is applied to the base of the ulcer only, care being taken to brush it all away if any should get on the surrounding skin. If this precaution is not observed, a more or less severe eczema will almost certainly follow. Over the powder apply a piece of sterilized gauze, covered by absorbent cotton protected by oiled silk or non-absorbent cotton and apply the bandage as I have already directed. If the base of the ulcer is covered with healthy granulations, a less stimulating application will be better borne. As such I use iodoform or acetanilid, one part and boric acid seven parts. When, as occasionally happens, the ulcer is exceedingly painful, a little poultice may be used for a few days with good results in some cases. In case hypergranulation tissue is present, it must be destroyed by caustics or a curette. Powdered alum has served me well in a few mild cases. Ordinarily the dressings should be changed every evening at first and less frequently as the discharges decrease. In a few rare cases it may be necessary to change them twice daily for a few days, otherwise the discharges will irritate the skin. After a few iodoform dressings, some patients will develop a

general erythema and other symptoms of iodoform poisoning. In others calomel will be found to be too irritating. Where neither of these can be borne I have learned to depend on acetanilid.

For the acute eczema so often accompanying these ulcers I have used various applications, the most satisfactory of which consists of kaolin 15 grammes, oxide of zinc 12 grammes, linseed oil 15 c c., solution of sub-acetate of lead 12 c c. Mix the kaolin and oxide of zinc and the solution of lead, then add the linseed oil immediately and mix thoroughly in a mortar. This makes, when properly prepared, a very smooth paste. It should be kept in a wide-mouthed bottle, well corked to prevent evaporation. This paste should be thinly applied with the finger or a small brush. Unless applied too thickly it will dry in fifteen minutes. By dusting a little finely powdered oxide of zinc over the application, it can be dried even more quickly. The bandage must not be applied before the paste is dry. These applications need not be made oftener than the ulcer is dressed. If there has been much oozing the paste will have been detached from the skin and can be easily removed. Those parts which are adherent should not be disturbed, but all that is loose must be removed and a new coat applied as before. Unless it is absolutely necessary for cleanliness, the affected parts should not be washed. Water irritates the delicate skin and increases the oozing. Treatment must be continued until pigmentation has occurred. It ought not to be necessary to remind you that the general health of our patient must be looked after. If necessary, provide for proper elimination and tone up the system. These patients will all be grateful to you after they are well, but most of them will not believe all you tell them until they are well. Doubtless there are many other remedies which can be locally applied with results equally as good as those which I have detailed. Some others may be even better, but the general principles upon which I have placed so much stress must be the basis for all our treatment.

THE IMPORTANCE OF SALICYLIC ACID OVER THE SALICYLATES IN THE TREATMENT OF ACUTE ARTICULAR RHEUMATISM.

By A. G. Ellis, M.D.

THE following case is interesting as demonstrating the fact that in acute articular rheumatism, where there is a tendency to stubbornness on the part of the disease, pure salicyclic acid often is far more efficient than any of its salts. The advantage which the salicylates are supposed to have over the acid is that they are more pleasant to the taste and less irritating to the stomach. The salicylate of sodium contains 48 grains of the acid to the drachm. The ammonium salicylate is preferable to the sodium salt, and can be prepared extemporaneously in the following manner: Taking 1 drachm of salicylic acid and 5 drachms of syrup and adding aqua ammonia in sufficient quantity to dissolve the acid, the finished product will make about 6 drachms, and a teaspoonful will represent 10 grains of the acid.

The patient was a child ten years of age; she came under treatment on January 30, 1899. Her father and mother are healthy people, and they do not remember that she was ever sick before; so that there is nothing in the personal or family history to bear upon the case. Thirteen days before coming under observation she took cold, felt hot and was sick at her stomach. On the following day her ankles and feet became swollen and tender, and she could not bend her wrist. She had profuse sweats at night, but they were even worse in the daytime. Her right hand and wrist became very sore and swollen; this condition spread also to her left hand, her shoulders and her knees.

This was her history when I saw the case for the first time. Upon examination I found she had some fever, which subsequently ran considerably higher. Her tongue was thickly coated and disposed to be slightly tremulous.

Her heart was perfectly quiet and steady, showing no sign of involvement. To relieve her pain the joints were wrapped in a lotion of lead water and laudanum. The child has improved considerably under treatment, until now there is no pain, tenderness or swelling in any joint. She was placed at first on a simple fever mixture and then on sodium salicylate until 18 grains had been taken. The books make a great point of distinguishing between acute and sub-acute articular rheumatism, muscular, gouty and chronic rheumatism, but in practice it is often extremely difficult to distinguish between them. This case was undoubtedly an unmistakable case of acute articular rheumatism.

It seldom happens in this climate that there is any but the one termination for these cases; they will recover, but it does sometimes happen that these cases die. As to treatment, I found that the child was not responding to the medicine as quickly as I thought she ought, and so placed her on the genuine salicylic acid. It seems to me that we have not done our entire duty to our bad cases of acute articular rheumatism until we use salicylic acid. In the first place, in giving the salicylates we are only giving from one-half to three-quarters of the amount of the acid, and in violent cases the acid seems to take hold of the cases far better than the salts. In these stubborn cases it has been my habit to give 10 grains of salicylic acid every hour until six doses have been taken or one drachm. Of course, it is impossible to continue giving this amount of the drug any longer, for the patient will otherwise be sickened or at least have severe pains in the stomach. In my experience the best way to give the drug is in 5-grain pills. Given in the form of a compressed tablet they will dissolve quickly and nicely in the stomach. In an adult two of these pills given at a dose will produce the best results. If these 10 grains are put into an empty stomach it is liable to upset it, so I generally order the drug to be given in milk.

The salicylate of sodium is undoubtedly milder in its action on the system and less likely to produce bad results, and hence it should be used first in the treatment of a case of this sort. When the salicylates were introduced into therapeutics their use was thought to be the death blow to rheumatism, but while it was a great therapeutic advance, this drug does not cure rheumatism in the way that

was expected of it. We are by no means sure that it shortens the attacks, but it certainly relieves the pain, and for this reason alone it is a great therapeutic agent. In former years it was no uncommon sight to see strong men and women tied down by the rheumatic pain and unable to restrain their cries. We see no such sights to-day. If the salicylates and salicylic acid do no good we are compelled to go back to the old fashioned treatment of using the iodides.

It is only in the true acute articular rheumatism that you can expect to get the best effect of these newer drugs.

THE DIFFERENT FORMS OF UREMIC PARALYSIS.*

By Dr. Baillet, of Paris, France.

Whatever be the nature of the nephritis or of its prodromal signs, the paralysis does not set in, in two-thirds of the cases, all of a sudden; it is accompanied by convulsions or begins with coma.

Convulsions.—These are observed particularly in subacute cases, in the course of which they represent in certain cases a prodromal phenomenon. More frequently they precede the motor disorders. Their similarity to the convulsions of essential epilepsy is perfect, yet they may appear under the most varied forms. Loss of consciousness, obliviousness of the attack, a succession of tonic and clonic phases, spasms throughout the whole body and of the face; still, in some cases there is not the initial cry, the biting of the tongue, nor the flexing of the thumb into the palm; sometimes the tonic stage is absent.

The convulsions may be limited to one side of the body, to one limb, to the face, and presenting the characteristics of Jacksonian epilepsy, they are accompanied by loss of consciousness, contrary to what is observed in epilepsy local of other origin.

The partial convulsions are situated on the same side of the body as the motor disturbances, and they are not constant as to the moment of their appearance nor in their manifestations. They may appear at intervals of several days (Giammattei) under different aspects; unilateral in the first seizure, then generalized in the second (Finlagson). In duration they vary from a few minutes (Chantemesse and Tenneson) to several hours (Raymond), from nine hours (Finlagson) to two days (Dunin). When the attacks recur frequently there is an actual status epilepticus.

These partial convulsions may be noted without paralysis; yet this is exceptional.

Coma.—Not less frequently than the convulsions to which they often are joined is coma, which may constitute an initial phenomenon of the uremic paralysis. Suddenly the patient falls into a state of complete muscular helplessness, with insensibility to all external stimuli. This comatose state may often be present in any degree, but very often it is represented by a state of stupor; consciousness is not wholly abolished; he is able to speak a few words, to answer a question shouted at him, or one may elicit a gesture in response to an order repeated with emphasis. It is often that a conjugate deviation of the eyes and head, or a deviation of the face, will put the physician upon the right track, that a paralysis is present, which is confirmed by lifting the limbs from the bed.

This period of coma is frequently transitory. It lasts from a few minutes (Raymond) or more; it may persist for three days (Chantemesse and Tenneson). Again, it may be repeated several times within the same day (Boinet). In one-third of the cases the paralysis occupies at once the foreground, without convulsive or comatose phenomena. Spasmodic disorders rarely complicate its development; as to the coma it constitutes the usual termination of uremic paralysis, which ending is death.

Clinical Forms of Uremic Paralysis.—Uremic generally (63 per cent.) assumes the right or left-sided hemiplegic paralysis indifferently. This hemiplegia is total or partial. In about one-half the cases, particularly when right-sided, it takes on the brachio-crural form. Very often (15–20 per cent.) it may be brachial monoplegic, which is more often isolated than associated with facial paralysis. This monoplegia is preferably right-sided, and then it is many times associated with aphasia.

Facial paralysis, often accompanying hemiplegia and sometimes monoplegia, is rarely present alone.

The other types of paralysis are exceptional; as, for example, the two cases of paralysis of the vocal cords reported by Ivins, the hemiplegia alterna with Weber's syndrom (Jackel), the ocular paralysis, strabismus and ptosis, the bilateral paralyses, brachial diplegia or quadriplegia (Giammattei).

The beginning and the evolution of uremic paralysis differ according to the nature and the course of the nephritis of which it is the basic cause.

Clinically one may distinguish two classes of cases according as the kidney lesion appears in old persons or children, or in adults, and again according as the nephritis be a chronic arterial, interstitial or subacute diffuse parenchymatous renal affection.

A.—Uremic Paralysis in Chronic Nephritis.—Here it is preceded by a few and insignificant prodromata and it ordinarily becomes manifest by a sudden loss of consciousness, which precedes or accompanies the hemiplegia. This apoplectic seizure often resembles very closely, so much so that one may be confused, a cerebral lesion of focal origin, and especially central cerebral hemorrhage. There is inertness of the limbs, insensibility to external irritations, sometimes conjugate deviation of the head and eyes. The incontinence of faeces and urine, the elevation of the temperature (Chantemesse and Tenneson) complete the similarity of the clinical picture. The deception is the easier as usually the patient is a person advanced in life, where a vascular lesion would be expected. Nevertheless, in cases that have come to necropsy, as in that of Perret, no trace either of an area of softening or of hemorrhage will be detected. The arteries will be found normal. Such phenomena can only be attributed to an oedema of the brain substance, to the serum that dilates and fills the ventricles and which oozes out in notable quantity on cutting into the meninges.

Raymond has published a case of uremic paralysis simulating a meningeal hemorrhage, yet where the necropsy only revealed an oedema of the cerebrum. Finally, there are cases where the paralysis simulates a paralysis following cerebral softening, with sudden setting in, as after embolism or thrombosis.

B.—Uremic Paralysis in Subacute Nephritis.—In this condition the paralysis assumes preferably the hemiplegic form, but it is very different in its courses. The error in diagnosis is nearly always avoidable, as the disturbances of motion are readily made out. Here the paralysis supervenes as a phenomenon conjoined to a series of phenomena noted in children affected with scarlet fever. At times it has been observed in the nephritis of pregnancy, either before or after parturition.

C.—Facial Paralysis.—Hemiplegia of uremic origin is often partial, and assumes the brachio-crural type in one-half the cases. In the other portion it is accompanied by a facial paralysis which on the contrary is rarely found together with the monoplegic form (three times out of eleven). This facial paralysis does not differ in any way, except possibly by its rapid development, from that with cerebral hemorrhage. Isolated facial paralysis is more interesting, but it is very rare.

Characteristics of Uremic Paralysis.—*Intensity.*—Usually the paralysis reaches its greatest completion at the moment of its appearance, or it attains it the following day. It seems that incomplete paralysis is more frequent in chronic nephritis, while in all cases of sub-acute nephritis it is complete. It is usually only complete for a short time, for it either is covered by the coma, ends in death or, another not less important feature, its variability, sets in.

Flaccidity.—Whether complete or not these paralyses are flaccid and remain thus during their evolution. However, contractures have been observed in seven cases; they were always noted as appearing early in the course of the case.

These precocious contractures resemble those following hemiplegia due to cortical irritation, or a cerebral hemorrhage with inundation of the ventricles. In five cases, death having occurred, the necropsy demonstrated the presence of abundant serous fluid in the meninges (Raymond)

* *Translated by Dr. F. H. Pritchard, of Monroeville, Ohio, from *La Settimana Medica*, No. 35, 1898.

or infiltration of the brain substance by considerable oedema; or, a decided quantity of serum filling and dilating the lateral ventricles. These contractures, in one case excepted, affected the paralyzed limbs.

Variability.—Uremic hemiplegia may persist without notable modification until death ends the scene, or it may gradually decrease little by little, to disappear almost suddenly and to reappear. Its duration varies between a few hours to five days. Death generally ends the matter.

Phenomena Accompanying the Uremic Paralyses.—Disturbances of sensibility have been noticed in all uremic states. Though sometimes unaffected in the majority of cases, it was diminished or abolished. It should not be forgotten that it is not the grade of the paralysis that regulates the sensibility, but the state of the intelligence.

Reflexes.—The patellar reflex is usually abolished or decreased on the paralyzed side, yet it may be normal or exaggerated. As to the pupils, they are generally myotis contracted.

Conjugate deviation was noted in a dozen cases as associated with the hemiplagia. Ordinarily on the opposite side to that paralyzed; it may be on the other. In three cases of this kind it was ascribed to contracture of the muscles of the neck of the paralyzed side.

Thermic Curve.—Most often there is no modification of the temperature. In five cases only the elevation noticed appeared to be due to uremic poisoning. In the others it was apparently a pulmonary complication to the convulsions, etc. On the contrary, a lowering of the temperature has never been detected.

Uremic Aphasia.—The uremic aphasia usually is noted as a pure motor aphasia, but it is probable that agraphia together with blindness, often complicates motor aphasia and word deafness. Uremic aphasia is generally preceded by serious manifestations of urinary poisoning. It is most frequently associated with hemiplegia, which is either total or partial and generally right-sided. The aphasia may supervene independently of any motor disorder of the limbs or face. Three cases of sensorial aphasia without associated motor aphasia are reported.

Prognosis.—From a study of the case it seems that the appearance of a uremic paralysis is of grave prognostic importance. Death follows in three-fifths of the cases in a period varying from a few hours to a few days.

Diagnosis.—The diagnosis of uremic paralysis is of extreme difficulty, especially of those occurring during the course of chronic nephritis.

Treatment.—Treatment is that of the uremia in general. An abundant venesection appears to be indicated above all things, before the administration of diuretics and before commencing with the milk diet.

Pathogenesis.—After presenting all the theories offered to explain these paralyses, the necroscopical findings and the experimental facts are considered. Out of thirty-nine cases a necropsy was done thirty-five times, and the clinical course of the case had been under observation. In twenty-nine of these there were twenty in which no focal lesion could be detected; in four others there were such lesions.

Paralyses without Macroscopic Lesions.—Together with the constant lesion in the kidney, the most frequent fact is the cerebral oedema which has been noted in twenty cases. Exceptionally limited or predominating in one-half of the brain, this oedema ordinarily diffuse, infiltrates the brain substance and exudes from the surface of the incision. It may be abundant and then there is an appreciable dilation of the ventricles. Subarachnoid dropsy or infiltration of the pia mater may replace oedema of the cerebral substance. But in the great majority of the cases the yellowish serous fluid oozes out after incising the dura mater; it infiltrates the pia mater as well as the substance of the hemispheres. Often this oedema is accompanied by a marked cerebral anaemia. Sometimes this anaemia may be present with absence of any oedema or of any vascular lesions (Lancereax). Oedematous infiltration may be lacking in other cases.

Finally, it is well to remember that in old persons cerebral atheroma is quite frequent (Raymond). But there is no constant relation between atheroma of the arteries of the brain and oedema.

Paralyses with Macroscopic Lesions.—Also here the renal lesion is constant and the oedema is frequent, but not constant; more frequently foci of softening, haemorrhagic areas, etc., have been noted.

Experimental Studies.—The experiments of Raymond and Arthaud to determine that the local paralyses of uremia are caused by vascular modifications, to which a persistent anaemia is conjoined, thus giving rise to paralytic disturbances in the limbs, are but little conclusive. The efforts in attaching importance to the vascular disturbances of the cerebral circulation in old persons with paralyses of cortical origin may be viewed in the same manner.

Nature of the Uremic Paralyses.—Clinical facts bear witness to the susceptibility of the cerebral cortex to uremic poisons. Recently Donetti has demonstrated experimentally the existence of cellular lesions peculiar to themselves, and which were most pronounced in the gray matter, varicose atrophy of the prolongations of the nerve cells and of the neuroglia. These cellular lesions, still but little known, explain without doubt the abnormal duration of certain uremic paralyses, and their slow restoration to the normal. How these local symptoms are produced by an uremic intoxication can only be explained by the special susceptibility of the cerebral cortex to uremic toxines, the circulatory modifications depending either on atheroma or direct action of these toxines on the arteries, partial oedema and finally individual predisposition, congenital or acquired, of the psycho-motor zones.

THE HERNIA GUARANTEE AND THE MINIMUM OF CONFINEMENT AFTER OPERATIONS FOR APPENDICITIS WITH AND WITHOUT PUS.

By George M. Edebohls, A. M., M. D., New York.

The writing of this paper was suggested by the perusal of an article by Dr. George Woolsey on "Some Points in the Treatment of Appendicitis When Pus Is Present," which appeared in the *Medical Record* of April 1, 1899. The points or propositions contained in this article are admirable so far as they go, the only objection being that they do not go far enough. In one or two respects, as I hope to show, they stop just short of the ideal surgery applicable to the class of cases under consideration. Before discussing the surgical management of cases of appendicitis with the presence of pus, to which Dr. Woolsey's paper relates, I may be permitted a few remarks relative to the technics of operations for both acute and chronic appendicitis, with absence of pus.

The readiness of surgeons at the present day to advise and undertake operation for chronic appendicitis is based upon a recognition of the following facts:

1. Chronic appendicitis not only debars its victim from the full enjoyment of health and happiness, but is a direct menace to life itself by reason of the ever present danger of implanted attacks of acute appendicitis.

2. Chronic appendicitis dependent upon movable right kidney may, as shown by the writer, occasionally and under favorable conditions apparently end in resolution and remain permanently cured after right nephropexy. The only other cure of chronic appendicitis possible, outside of operation, is by slow and uncertain progress of the inflammation to obliteration of the appendix, a process entailing years of suffering and constant peril of life.

3. The diagnosis of chronic appendicitis can be made in every case by the method of palpation of the vermiform appendix, elaborated and first described by the writer.

4. The mortality of operations for chronic appendicitis is practically *nil*. I have operated for chronic appendicitis 131 times in all, without losing a single patient.

5. With up-to-date technics a patient may leave his bed well within a week, and be back at his usual occupation at the end of two weeks or less after an operation for chronic appendicitis.

6. With proper and faultless technics hernia and a disfiguring scar can be absolutely guaranteed against, and this irrespective of the length of the incision required in the particular case.

We have at our disposal at present, to meet the indications of any given case, three good and perfectly satisfactory incisions for the surgical treatment of chronic appendicitis: The gridiron incision of McBurney, the rectus incision of Battle, and the lumbar incision. The old incision parallel to Poupart's ligament, or any incision severing the various abdominal muscles in one and the same line should find no place in the work of the modern surgeon.

The gridiron incision of McBurney, dividing or separating the muscular fibres of the various planes of the abdominal wall in the direction of the fibres of each muscle, is too well known, and its merits are too generally recognized, to call for further remark.

The incision through the rectus muscle, sometimes called the trapdoor incision, is not so generally known and practised as its advantages merit. W. H. Battle is its author, although it was subsequently described by Jalaguier, Kammerer, and Lennander, each apparently under the impression that the method was original with himself. Deaver has admirably illustrated this incision. It consists in a vertical incision within the outer edge and parallel to the fibres of the right rectus abdominis muscle. After dividing the aponeurosis of the external oblique and the anterior sheath of the rectus muscle, the outer edge of the muscle itself is drawn inward and the posterior sheath of the rectus or transversalis fascia with the peritoneum is cut through. Lennander in his first cases divided or separated the fibres of the rectus muscle in the same line with the original incision, and I still prefer this method, which I have now employed for several years. The reasons for this preference lie in the fact that it enables us to open the rectus as near as we please to the median line. An incision thus placed avoids the division of large nerve trunks and constitutes an obvious advantage in women, in that it enables us to determine by palpation and, if necessary, by inspection, the condition of the uterus as well as of both ovaries and tubes. For this purpose the incision is made just long enough to admit of the introduction of two fingers. Another advantage of the Battle incision is that it can be readily extended, upward or downward, as far as may be necessary, as, for instance, in tracing and enucleating a diseased appendix running upward to the vicinity of the liver, or in carrying out any operative procedure upon the uterus or its adnexa. The gridiron incision, on the other hand, has its well-marked anatomical limitations, beyond which it becomes impractical.

The choice between the McBurney and the rectus incision is determined by palpation of the appendix at the time of operation after the patient is anæsthetized. If the appendix is found within reach of an incision through the rectus, or if it can be displaced by the fingers so as to be brought within reach of such incision, the incision of Battle is preferred. Contrary conditions obtaining, the gridiron incision is employed. As a matter of fact, I have of late years employed the rectus incision in chronic appendicitis at least four or five times to every once that I have felt impelled to resort to the gridiron incision.

In closing either the gridiron or the rectus incision, a running suture of forty-day catgut applied in the manner described by the writer is employed. Hernia is thus guaranteed against, and my patient may leave the bed, if he or she chooses, at any time after the bowels have moved on the third day.

The third or lumbar incision for chronic appendicitis, original with the writer, is employed only when right nephropexy is performed simultaneously with appendectomy. I have thus far operated upon the appendix fifteen times through the lumbar incision.

The skin in each of the three incisions is closed by the intracuticular suture to avoid a disfiguring scar, a matter of some importance to most women.

As regards treatment of the appendix itself in cases of chronic appendicitis, inversion of the entire uncut appendix, as originated by the writer, is preferred in all cases in which it is practicable. I have thus inverted the entire appendix in 116 patients, ninety-seven of them suffering from chronic appendicitis. In the remaining nineteen patients the normal appendix was inverted incidentally on the occasion of coeliotomies undertaken for the relief of other conditions.

While the technics of operation for chronic non-purulent appendicitis may be said to have reached an absolutely satisfying stage and to be considered as having done so by surgeons as a class, the same cannot be said of the operation for appendicitis with the presence of pus. A great many, if not the majority, of gynæcologists the world over, have practically abandoned drainage for pus in the pelvis, closing for primary union after careful cleansing, in nearly all of these cases of pus limited to the pelvis. Although the analogy between purulent appendicitis on the one hand, and pyosalpinx, ovarian abscess, etc., on the other hand, does not hold good in all respects, still I believe that further experience will lead us to choose for primary union in a proportion of cases, at least of appendicitis with pus, after removal of the diseased appendix and careful cleansing and disinfection of a limited area of infection. Such cases will, of course, as far as the period of confinement and the guarantee against hernia go, be upon about the same plane with cases of chronic appendicitis.

We come now to a fact not sufficiently well understood and recognized—to wit, that even in cases of appendicitis with purulent infection so virulent or so extensive that drainage becomes indispensable, the resources of our art enable us to reduce the period of confinement to two weeks or less on the average, and to guarantee our patients against hernia. How this end is attained the writer will endeavor to show by outlining his present technics in the operation for acute appendicitis with pus.

In the first place, careful palpation is made of the tumor mass after the patient is anæsthetized and before the incision is made. The plan of the incision is based upon the result of such palpation. If the center of the tumor mass lies behind the right rectus muscle, the incision is carried through that muscle parallel to its fibres. Whenever, as is almost the rule, the most prominent point of the tumor is located laterally to the rectus muscle, the gridiron incision of McBurney is employed, and is so placed that the intersection of the line of cleavage of the external oblique with that of the internal oblique and transversalis corresponds exactly to the middle of the tumor. Retracting the muscles we have the tumor mass squarely exposed. If the abscess is found adherent to the anterior abdominal wall it is incised, all pus gently mopped out, and the walls are disinfected either by peroxide of hydrogen or gauze moist with sublimate solution before proceeding in search of further collections of pus. If the abscess is situated against the posterior wall of the abdomen, separated from the parietal incision by the intervening free peritoneal cavity, the latter must be protected by a properly placed wall of gauze. Each successive collection of pus is treated in the same way before proceeding to search for more, until we are satisfied by palpation that no further purulent foci exist. Not until then is the appendix, or what may remain of it, removed, if possible, by amputation just beyond its origin from the cæcum, and the stump inverted without ligation after the method of Dawbarn. A loose and slender column of gauze is next arranged for drainage, leading in a straight line from the site of the inverted stump to the opening in the anterior abdominal wall. The quadrangular form of the latter, due to the retraction of the separated muscular fibres and the placing of the center of the incision over the center of the tumor mass, will insure free and direct drainage. No sutures of any kind are placed.

The slender gauze column is diminished in bulk after two or three days and withdrawn entirely as soon as possible thereafter, sometimes as early as the fifth day. The object in proceeding thus is to allow the intestines to come together as rapidly as consistent with the safety of the patient, and thus to obliterate as speedily as possible the cavity formed by the column of gauze. As soon as this cavity is obliterated and the granulations have reached the level of the bottom of the abdominal incision, the wound is carefully disinfected, rawed, and closed for primary union. An anæsthetic is administered, and the wound is circumscribed by an incision through the healthy skin, carried as close as possible to the granulating edge of the latter. The granulating surface of the wound is dissected off in one clean piece from skin and sub-cutaneous fat, from the fibres and aponeurosis of the external oblique, from the internal oblique and transversalis, and from the peritoneal edge. The granulations presenting at the bottom of the wound are lightly scraped away with a spoon curette. We have now before us an incision identical in every particular with the freshly made gridiron incision; skin, fat, aponeurotic and muscular fibres lying bare in all the pristine freshness of the original operation. The peritoneal edge, the separated muscular fibres, and the aponeurosis of the external oblique are brought together by a continuous suture of forty-day catgut carried in two tiers and tied with a single knot. This suture is buried by closing the skin by means of the intra-cutaneous suture, and the operation is finished. On the next or the third day the patient bids adieu to his bed. The duration of confinement after an operation for appen-

dicitis with pus, in which drainage is demanded, will have been the time required for the abscess cavity to become obliterated up to a level with the deep surface of the anterior abdominal wall, say from five to ten or twelve days, plus a day or two required to get well over the effects of the anæsthesia of the second operation—a total period of confinement to bed of from one to two weeks. Primary union is attained with no less certainty, although with the necessity of greater painstaking, than in fresh incisions of the abdominal wall, and with up-to-date technics the guarantee against future hernia is equally good.

So vast is the literature of appendicitis, embracing more than twenty-five hundred books and journal articles, that it is almost inexcusable to add thereto except for very good reasons. The writer has just completed the task of looking through this entire voluminous literature, and as the result of his labors has reached, among others, the following conclusions:

1. Sufficient attention has been called to the technics of the perfected operation for chronic appendicitis, to render ignorance thereof inexcusable on the part of anyone practising abdominal surgery.

2. The technics of the operation for acute appendicitis with pus still form a subject for discussion. The principles underlying the operation, as enumerated in this paper, will if adopted, lead to results as satisfactory, comparatively, as those obtained in chronic appendicitis.

3. The value and universal applicability of the gridiron incision of McBurney in cases of acute appendicitis with pus, though dwelt upon in recent years by a number of American surgeons, are not in practice sufficiently appreciated.

4. Nor is the fact too widely know that the duration of confinement after operation for chronic appendicitis need not exceed a week, and may indeed be considerably shorter.

5. The duration of confinement after operations for acute appendicitis with pus, excepting cases in which fecal fistulae form, need rarely exceed two weeks at the outside. Since putting into operation the technics above outlined, the longest period of confinement in the writer's practice has been in one case fifteen days. In that case five separate intraperitoneal pus pockets had to be drained, and the wound was not ready for secondary closure until fourteen days after operation.

6. Hernia need no longer be dreaded after operations for appendicitis, acute or chronic, with or without pus.

7. There seems to be no longer any good reason why all patients suffering from appendicitis, acute or chronic, should not have the benefit of operation.—*Medical Record.*

TREATMENT OF CHRONIC ULCERS.

By Malcolm Cameron, M.D., Washington, D. C.

Early in October, 1895, I was called in consultation by Dr. L. J. Hooper to see Ella J., a light mulatto, about thirty-six years old, unmarried; occupation, house servant.

The patient had been under treatment more than two weeks for two formidable looking ulcers, situated upon the outer side of the right leg: the smaller one just below the knee, and the larger one at the point where the calf and ankle meet, and on a line with the smaller ulcer.

The diameter of the large ulcer was (2½) two and a half inches and it was one and a half inches deep.

The ulcers presented a deep, eaten out appearance; edges livid red, rounded and smooth. The surrounding skin was liberally peppered with pale yellow blisters, ranging in size from a pin's head to a common white bean. For the distance of an inch or more around the ulcers the tissue was as "hard as a board." The base of the ulcer consisted of a mass of necrosed tissue, "loud" in odor and as tough as india rubber. Hard masses, sensitive to pressure, were found on other portions of the leg. For three years the patient had been subject to "attacks" similar to this one. A spot would become hard, sore to pressure; blisters large and small would form, and finally the skin would break down, forming ulcers very difficult to heal. The pain in them, from her description, resembled that of carbuncle.

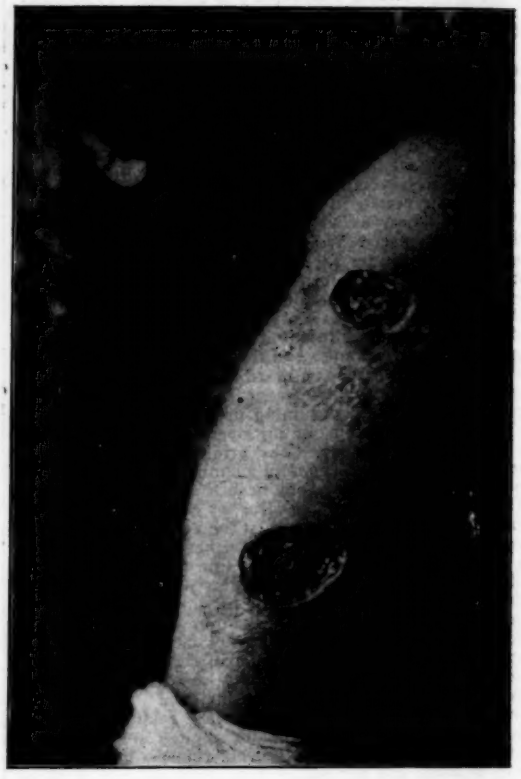
The general strength of the patient was fair; she continued at her household duties in a hobbling way; appetite poor and sleep disturbed by pain.

I advised Protonuclein tablets per orum, three times daily. Protonuclein special, morning and evening, as a local dressing for the ulcers.

In a few days Dr. Hooper turned the case over to me, as he was preparing to leave the city.

Morning and evening the ulcers were cleansed with warm alkaline—bicarbonate of soda—water, dried with lint and packed with Protonuclein special, covered with gauze and absorbent cotton.

The dressings were kept in place with a lightly applied roller bandage. The patient said that the dressing caused



a sharp pain for about half an hour. There was copious weeping of the ulcers during the treatment, not much pus.

From time to time the necrosed tissue was clipped away with scissors.

Healthy granulations soon appeared, and after all dead tissue was removed they filled the cavities, leaving a smooth scar.

By reference to the photograph a good idea of the appearance of the ulcers may be had; the roughness of the skin represents the blisters.

The treatment was continued for four weeks, resulting in a complete cure; the patient dressed the leg during the latter half of the treatment.

Diminished sensibility of the leg had existed for some time; normal sensibility returned during treatment.

Recently the patient reported that there had been no further trouble with blisters or sores, and that since her leg was cured her general health has been good.

—The centenary of Volta's discovery of the electric pile is to be celebrated this month at Como, Italy, where the great electrician was born, and where he died in 1827. Exhibits are announced from all parts of Europe and America, and a congress of electricians and telegraphists will be held at the same time. The exhibition buildings face the lake, on which the latest inventions in electric boats and launches will form a conspicuous feature in the *fetes.*

The Medical Times

A MONTHLY JOURNAL

OF

MEDICINE, SURGERY, AND COLLATERAL SCIENCES.

EDITORS:

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"What is life but the angle of vision? A man is measured by the angle at which he looks at objects."—EMERSON.

A LESSON SOON FORGOTTEN.

THE recent death of the Hon. Roswell P. Flower points a lesson which, we fear, will be but little heeded by those to whom it should serve as a warning so powerful as to influence all their future lives. There is a fascination in the developing and working to a satisfactory conclusion great enterprises, in which, perhaps, millions of money are involved, and which may affect the interests of large communities. Mind grapples with mind; there is no rest, no pause, but an incessant nervous strain vibrating with the enthusiasm of success or the fear of failure, which must, if long continued, tell with fearful force upon the vital organs of the physical structure. The circulation becomes deranged, the digestive organs occasionally losing their grip, and the great heart muscle weakened with its violent pulsations until its fibres lose their tone, when with some sudden shock or an apparently trifling cause, they fail altogether in their work. How easy or quick the end may come when the system becomes weakened by physical fatigue, mental strain, or both, the stomach unable to dispose of the material forced upon it, paralyzing the par vagum and thus slowing the action of the heart until the whole body becomes cyanotic, poisoned with carbonic acid, from a failure of reoxygenating the blood, until brain cells cease to work, the heart to act, and physical life ceases.

How often we are startled by the sudden death of men prominent in the community, who have lived for years a life of mental excitement, passing from one great enterprise to another, working out with ceaseless activity the problems of the world's development, and neglecting the absolute necessities of rest and the nourishment adapted to their physical and mental needs.

It is often not the mere desire for wealth for itself alone which actuates some of our ablest financiers in their vast combinations, in their far-reaching plans, but rather the opening great avenues of industry, which will contribute to their country's prosperity, and the physical and mental strength and comfort of the world. The wealth which necessarily follows success is freely expended for the public good. Many of our colleges, hospitals, and asylums which pour out their riches of intellectual thought and are a resting place for the poor and a gateway of health to the sick and the dying, owe their existence to those very men who have toiled early and late and have sacrificed their lives, unwisely, it is true, in the accumulation of wealth which has been freely and wisely bestowed for the good of humanity. Who could desire a more enduring or grander monument, more lasting than bronze or sculptured marble, than the ever living and active force of an institution dedicated to learning, to the relief of the sick or to the comfort of helpless old age?

Mr. Flower, whose sudden death suggested the text of this article, has contributed with a liberal hand to the public institutions of this and his native city, notably the beautiful and spacious hospital which bears his name, in connection with the New York Homœopathic Medical College. What more graceful and appropriate tribute could be paid by the institution to the memory of the dead statesman and public spirited citizen who has identified himself so thoroughly with its prosperity by his counsels and benefactions than to call it by his name?

When the College was organized its charter permitted it to confer only the degree of "Doctor of Homœopathic Medicine." A few years later the charter was so amended as to enable the college to confer the full title of "Doctor of Medicine."

The institution claims to be a medical college in the broadest sense of the term, covering all the branches taught in other institutions, but with a more special study of the dual action of drugs as proved upon the healthy organism, a line of study fully endorsed by the advanced therapeutics of all schools throughout the world. However valid may have been the reason in the early days of the Homœopathic school for identifying its institutions with a distinctive sectarian name, it is a matter worthy of the most careful consideration, if, in the present advanced and ever advancing state of medical thought, when the most accurate scientific

tests are being applied honestly and faithfully to every principle in medicine, and to every new thought developed in the wide range of studies connected with our profession, the retention of that name in our colleges and hospitals does not retard their influence and create in the minds of scores of students in after years a feeling of regret that in a profession ever broadening in its scope and becoming more and more a unit in its work, their diploma, in name at least, is a distinct sectarian one, and out of tune with that broader liberty which looks upon the whole world as its own.

There is no disputing the fact, for the records are open to all, that every year many, very many physicians, on whose diplomas the name Eclectic or Homœopathic appears, seek and obtain from other colleges a non-sectarian degree, in which no pledge is required or implied of adherence to any one dogma, and giving perfect liberty for that freedom of action based upon a careful education and mature thought.

At the commencement of the Cleveland College of Physicians and Surgeons last month, no less than fifteen Homœopathic physicians secured the diploma of the college after having spent the winter in study.

The fact stands out with startling clearness that more or less graduates from every institution in the country, having on their diplomas a sectarian name, Eclectic or Homœopathic, seek and obtain a diploma from other institutions, not perhaps because their instruction is any better, or that they wish to change their principle of practice, but because by doing so they are placed more in touch with the whole medical world and the public and private advantages which would naturally flow from such connection. The question appeals strongly to our sense of justice, whether a mere sentiment in which no principle is involved should stand in the way of the ultimate good which might be accomplished in more liberality of thought, a greater freedom of action, and blending of professional courtesy.

The columns of THE TIMES through its more than a quarter of a century of active life have always been open to the full, free and fair investigation of every principle of medical science, doing its utmost to soften the asperities of partisan warfare and to clear away obstructions to a better understanding.

From an entirely non-partisan standpoint, with certainly no intention of giving offense, we respectfully suggest to the trustees and faculty of the New York Homœopathic Medical College to carefully consider if its future influence and prosperity, its hold on public sentiment and its power as a great factor in the medical world will not be immensely increased by substituting for a sectarian name one honored in the counsels of the State and of finance, which has been largely identified with its growth and prosperity for a quarter of a century.

We are much mistaken if the name of the Flower Medical College would not meet the warm approval of the long roll of alumni who have made their mark as progressive men in every State in the Union, as well as that of the general profession.

THE LEPROSY CONFERENCE.

PERHAPS the most generally interesting chapter in the latest report of the Surgeon General of the navy, is that in which the proceedings of the International Conference on Leprosy, held at Berlin, Oct. 11-16, 1897, are described by Surgeon James D. Gatewood, from personal observation as a delegate. The management of the assemblage was strikingly successful. Very few papers were read in the sessions, but practically the entire time was devoted to discussion—the great purpose of a conferrence. There was consequently so little time lost, and the entire work was completed to such advantage, that there were not a few who felt that the large international medical congresses are too cumbersome and incongruous and should give way to smaller bodies, made up of men known on account of their original work and brought together to consider one set of questions. The first introductory address was made by Dr. Ehlers, of Copenhagen, who recalled the words of the celebrated Hensler, "We ourselves, perhaps, need not fear this malady, but our ancestors experienced its ravages, and possibly our children may have to suffer from it in their turn," and he asked whether it would not be better to isolate sporadic cases of the disease, than to await its extension like that of tuberculosis and have to do with a great epidemic. He protested against the apathy shown towards this unusual disease. He declared that many physicians were unacquainted with its symptoms, and that during the last twenty years so called new maladies had appeared which were only unrecognized leprosy. He desired to restore to leprosy that which belonged to it by bacillary right, and expected its study, too long neglected, to throw new light on the pathology of other infections. He proceeded to show that there is a striking analogy between leprosy, syphilis and tuberculosis, which form a natural family comparable to chlorine, bromine and iodine in chemistry. The pathological qualities of one are found with modifications in the others. He also expressed the belief that the study of the common infectious diseases would transform to a remarkable degree our conceptions of peripheral nerve disorders, and that

the study of leprosy would throw much light on the question of trophic troubles and those of sensibility. Prof. Ernest Besnier, of Paris, spoke with enthusiasm of the remarkable discovery of Hansen and of the work of Neisser in determining the method of staining the bacillus and in affirming its specificity, since which time not twenty years had passed. While paying a high tribute to the remarkable work of Zambaco Pasha, he took occasion to deny with emphasis the conviction of the latter that leprosy is not contagious and that heredity is all important. Dr. Armauer Hansen, a vice-president of the conference, made an address, which, on account of the prominence of the speaker and his extensive experience, commanded the closest attention. He said that all therapeutic experiments on lepers had proved so far complete failures, or at least too uncertain in the fight against the disease. It would therefore be more sensible and humane if we prevented the spread of the disease by isolation and employed that measure in our atempt to exterminate it. Should that result never appear, we would at least have made mankind happier and healthier. The nature of the disease, he believed, was toward a cure—that is, all lepers, if they lived long enough, would find a cure. That was the course of all bacillary diseases, acute or chronic. As Dr. Jonathan Hutchinson, of London, was prevented by indisposition from being present, his address was read in the conference. His position, as declared in that address, was the one he has so long occupied: "I ask to be allowed again to reiterate my conviction, a conviction which strengthens every year, that the cause of leprosy is the use of fish, in certain conditions, as food." He then proceeded to advance, with his usual ability, the arguments for his creed. It was apparent, however, that in spite of their high source they had very little weight in the estimation of the conference. Prof. Albert Neisser believed that we had the right to assert that leprosy is a contagious disease. We know that it is caused by a distinctly characteristic micro-organism. Unfortunately, we cannot cultivate the bacillus, nor do we know any lower animal susceptible to the disease. The disease is propagated solely by direct transmission from man to man; nowhere and never has anyone become leprous who has not been in contact with lepers. There is no reason to believe that leprosy is hereditary. What is considered to be hereditary transmission is simply infection favored by familiar cohabitation of members of a family. Anything, too, that goes to impair the resistance of the constitution to disease tends to infection. In an interesting letter writen by W. C. Baily, superintendent of leper mission asylums in India, and read in the conference, the statement is made that after twenty-seven years of experience he is convinced that if children of leprous parents are separated from leprous surroundings they will in most cases never contract the disease. He added that he had never known a missionary or native assistant working among lepers to contract the disease, and believed that it could only be propagated by inoculation, necessitating the segregation of all cases having open sores. Dr. Alvarez, of Honolulu, declared that he had never seen a child born with leprosy, and the youngest leper known in Hawaii was over three and one half years of age. The same speaker described a method for the bacteriological diagnosis of leprosy, which he considered was not only reliable in obscure cases but could be performed by a physician without laboratory facilities. The tissue to be examined having been removed, it is washed in normal salt solution and thoroughly triturated in a mortar until a homeogenous result is obtained, under the addition from time to time of enough saline solution to keep the specimen from drying. Then a small quantity is transferred to a cover glass, dried and fixed in the usual way, stained in carbol-fuchsin (warming for two or three minutes), washed and decolorized and counter-stained with Gabbett's solution for thirty seconds. If there are very few bacilli in the specimen it will be necessary to add more saline solution and use the centrifugal machine, or allow settling in a conical glass for at least twenty-four hours. Specimens kept in alcohol should be first immersed in water. It is very important to make a positive diagnosis of leprosy where the question is the banishment of the patient for life, and by this method he claimed a diagnosis could be made in a few minutes.

The secretaries of the conference presented at the close of the debates the following general conclusions to the conference:

As might have been expected, a considerable portion of the discussion has related to the bacillus lepræ, which the conference accepts as the virus of leprosy, and which for upwards of twenty-five years has been known to the scientific world through the important discovery of Hansen and the able investigations of Neisser.

The conditions under which the bacillus grows and develops are still unknown, as well as the way of its invasion into the human system, but from the discussions of the conference it seems probable that a unanimity of opinion will soon prevail in reference to its modes of subsequent dissemination within the human body.

Very interesting observations have been brought forward in connection with the elimination of the bacilli in large quantities by means of the skin and

the nasal and buccal mucous membranes of lepers. It is desirable for such observations to be confirmed wherever opportunities occur, as the question is of very great importance to those who are intrusted with the care of public health, inasmuch as leprosy is now acknowledged to be a contagious disease.

Every leper is a danger to his surroundings, the danger varying with the nature and the extent of his relations therewith, and also with the sanitary conditions under which he lives.

Although among the lower classes every leper is especially dangerous to his family and fellow-workers, cases of leprosy frequently appear in the higher social circles.

The theory of heredity is now further shown to have lost ground in comparison with the theory of the contagiousness of leprosy, at present generally accepted.

The treatment of leprosy has had only palliative results up to the present time.

Serum-therapy has so far been unsuccessful.

In view of the virtual incurability of leprosy and the serious and detrimental effects which its existence in a community causes, and considering the good results which have followed the adoption of legal measures of isolation in Norway, the leprosy conference, as a logical issue of the theory that the disease is contagious, has adopted the resolution prepared by Dr. Hansen and amended by Dr. Besnier. It is as follows:

(1) In the countries where leprosy forms foci or has a marked extension we have in isolation the best means of preventing the spread of the disease.

(2) The system of obligatory notification, of observation, and of isolation carried out in Norway is recommended to all nations with local self-government and a sufficient number of physicians.

(3) It should be left to the legal authorities, after consultation with the medical authorities, to take the special measures applicable to the special social conditions of the districts.

This proposition was adopted without a dissenting voice, and is intended simply to indicate, in a general way, the line along which each government dealing with leprosy should formulate its measures of control.

The voice of the conference, it is confidently believed, will be heard in all civilized countries, proclaiming, if nothing more, that the plague which for so many centuries has polluted and dragged down so many of the human race, is one of the contagious diseases and the hideous sister of syphilis and tuberculosis.

THE friends of Dr. Nicholas Senn are presenting his name as a candidate for Governor of Illinois next year. A man who has shown such ability in his profession, and who distinguished himself in the recent war as Lieutenant-Colonel of Volunteers and chief operating surgeon in the field, at Santiago and Porto Rico, has shown a versatility of talents which fit him to fill the higher positions of civil life.

ANNUAL MEETINGS OF MEDICAL ASSOCIATIONS IN JUNE.

THE American Medical Association will meet at Columbus, O., June 6. The American Neurological Association will meet at Atlantic City, N. J., June 14–16, and the American Surgical Association at Chicago, May 31–June 2. The American Institute of Homœopathy, Dr. Benjamin F. Bailey, of Nebraska, president, the oldest national medical society in the United States, will hold its fifty-fifth session in Atlantic City, N. J., June 20–24, and the International Hahnemann Association at Niagara Falls, the last week in June. The National Eclectic Society will meet in Detroit, June 20–22; the American Association of Physicians and Surgeons will hold its next annual meeting in Chicago, on May 31–June 2. Dr. L. D. Boynes, of Chicago, is president, and Dr. R. C. Kelsey, secretary. The purpose of this association is to unite in one common effort physicians of all schools, without regard to pathy. Any physician recognized by the State can become a member.

CUBA UNDER THE "STARS AND STRIPES."

AS the result of improved sanitation in Havana but one death from yellow fever is reported for the month of May. The work of cleaning the city, inaugurated by General Wood, in Santiago, is proving equally effective in destroying the breeding places of disease and lowering the death rate in other parts of the island. General Ludlow is utilizing the $350,000 placed at his disposal for sanitary work in sewering and paving the streets of Havana and other engineering work, giving active employment to over 3,000 men. The house to house inspection is enforcing the necessary regulations. In addition to this work a new disinfecting plant has been constructed, in which sea water is made a germicide by means of electricity.

Only four months have elapsed since the Stars and Stripes were hoisted over Morro Castle and the island came under the control of the United States. During those four months the principal cities in Cuba have been, in a great measure, redeemed from a shocking condition of uncleanliness. The good work that has been accomplished in this direction, and the improved health and activity of the inhabitants of Cuba, which

made reconstruction so much easier, must ever stand as a lasting monument to the lamented Waring, who lost his life in devotion, not to Cuba libre, but to Cuba freed from pestilence and open, no longer under the shadow of death, to the advanced civilization and progress of the world. In this connection the fact is not without special interest that since Cuba has been under American control taxes have been reduced one-half and yet the revenues have increased, and the expenditures for the public good more than doubled. Why may we not anticipate in the great empire we have won in the Orient similar results to those now being obtained in Cuba? This is missionary work in which all the active elements of science are put in force for the good of mankind. We respectfully suggest to the Government that a little of this good work be extended to Alaska.

MENTHOL ACETATE SOLUTION IN VOMITING AFTER GENERAL ANÆSTHESIA.

DR. J. HUBLEY SCHALL, who has had a very large and successful experience in the use of anæsthetics, says: "One of the most efficient anti-emetics I have ever used in controlling troublesome vomiting following general anæsthesia, is composed of menthol, gr. x; glacial acetic acid, one drachm; alcohol, one ounce; distilled water, one ounce. A piece of gauze is saturated with the menthol acetate solution and placed over the patient's mouth and nostrils, care being taken to allow all air inhaled to pass through the meshes of the saturated gauze. If the gauze is removed too soon nausea will follow. The same remedy has also been found beneficial in the nausea, the retching and vomiting of seasickness and pregnancy."

HOSPITALS FOR WORKING WOMEN.

WE have already mentioned the organization of a hospital in Brooklyn, on a large scale, under the name of the Breadwinner's. This hospital is only in a limited extent a charity hospital, everyone being expected to pay something, no matter how small the amount. Dr. Skene, formerly president of the Long Island College Hospital, has been elected president of the new institution, and the name changed from the Breadwinner's to the Skene Hospital for Self-supporting Women. In this connection we notice that the Woman's Hospital, occupying the block between Lexington and Fourth avenues and Forty-ninth and Fiftieth streets, will soon give place to a new building, six stories high, constructed of brick and stone, in the first Renaissance style, covering almost the entire block, and arranged to accommodate several hundred patients.

The idea of a woman's hospital originated with Dr. Marion Sims, and it was through his energy and the brilliant results obtained from his gynæcological operations, especially in vesico-vaginal fistula, that the idea obtained such a foothold in the profession and the public as to lead to the foundation of a hospital, which has contributed more than any other in the world to the development and success of gynæcological work.

As we look back for nearly half a century we recall, with pleasure, our acquaintance with Dr. Sims, as he first made his advent in New York from the South, full of enthusiasm over his specialty, and the zeal with which he urged the erection of a woman's hospital.

"Yes," said the venerable Dr. Mott, "there is no disputing the brilliant results you obtain, or the readiness of the rich men of New York to build the hospital, but where will the patients come from?" So little at that time was known in that department of our profession, now doing so much to relieve suffering and prolong life.

It is with a feeling of gratification and pride that we recall the fact that in those early days of struggle it was in a great measure through our effort that the first appropriation from the city, we think fifteen hundred dollars, was made to Dr. Sims' hospital, which he had established on his own responsibility, in a dwelling house in Madison avenue. The amount thus obtained from the city, small though it was, sufficed to tide Dr. Sims over the incipient stage of his enterprise, and demonstrated to the profession and the public the absolute necessity of such an institution.

The new building, to be erected on the ground where the old one has done such magnificent work, will be no less a monument to Dr. Sims than the one in bronze, now standing in Bryant Park.

INSTRUMENTAL MEASUREMENT OF FATIGUE AND PAIN.

WE have been permitted to excerpt from advanced sheets of a work soon to be issued by the Government Press, at Washington, by Arthur MacDonald, specialist in the United States Bureau of Education, some interesting facts obtained by the actual measurement in the human body of fatigue and pain through the ergograph and the temporal algometer, the latter designed by the author. Dr. MacDonald, in his experiments with the ergograph, found that if he voluntarily contracted a muscle frequently and each time raised a weight with his utmost force

the muscle weakened and after a time scarcely stirred the weight. But if now he continued to make the effort regardless of the results, with all the power of his will, sooner or later the strength of the muscle began to return and to move the weight almost as before. Then the strength would gradually cease for the second time, showing an almost complete loss of power to voluntarily contract the muscle, alternated with periods of nearly complete recovery of the strength. This phenomena were due to the results of fatigue, caused probably by changes in the central nervous system, the periodicity illustrated by the "second wind" of the athlete.

The *temporal algometer* shows the sensibility to pain decreases with age. The left temple is more sensitive than the right, and the left hand more sensitive to pain than the right. There is an increase of obtuseness to pain from ten to eleven years of age; then a decrease from eleven to twelve; then an increase from twelve to thirteen. From thirteen to seventeen, while the right temple increases in obtuseness the left temple increases in acuteness.

Girls in private schools, who are generally of w. althy parents, are much more sensitive to pain than girls in public schools. The non-laboring class are more sensitive to pain than the laboring class. It would thus appear that refinements and luxuries tend to increase sensitiveness to pain.

University women are more sensitive than washerwomen, but less sensitive than business women. There seems to be no necessary relation between intellectual development and pain sensitiveness. Self-educated women, who are not trained in universities, are more sensitive than business women. Giving the divisions in the order of their acuteness to the sense of pain they would stand as follows: First: Girls of the wealthy classes; Second: Self-educated women; Third: Business women; Fourth: University women; Fifth: Washerwomen. The greater sensitiveness of self-educated women as compared with university women may be due to the overtaxing the nervous system of the former in their unequal struggle after knowledge. The girls in public schools are more sensitive at all ages than the boys. The author suggests the practical value of these tests as shown in his tables should be utilized in the physical and mental education of children. Pupils 20 per cent. above or below the average given in the tables should either not be admitted in school or should form a class by themselves. There are too many bright pupils with weak bodies.

The author says, in his introduction to the study of Emile Zola, there is more definite knowledge about rocks and plants than about man, and though we have made science of the former, a science of human beings hardly exists. The instrumental investigation of man, which psychology has recently introduced, is a purer method of presenting the effect of mental, moral and physical forces upon the body of man of which we are unconscious, and the knowledge thus obtained leads to the most practical and far reaching results in education, business and the whole conduct of life. These studies, now being prosecuted by Professor MacDonald under government patronage, are among the most important in the valuable work of the Bureau of Education.

FAITH CURISTS AND CHRISTIAN SCIENTISTS.

PRESIDENT MURPHY, of the Board of Health, has issued orders directing all sanitary superintendents to take steps to suppress all faith curists or others who practice medicine without diplomas. The superintendents are instructed to co-operate with medical societies. These specialists will of course be permitted to bring all the healing power they possess to relieve the sick, but the question of the efficacy of those powers, as practised by them, to the exclusion of the more tangible measures adopted by scientists, will be carefully examined in case of death.

DISPENSARY LAW.

UNDER the new Dispensary Law, Dr. Stephen Smith, of New York City, Enoch V. Stoddard, of Rochester, and Simon M. Rosenthal, of Albany, have been appointed a special committee to gather information respecting the conduct of dispensaries, and to formulate rules concerning the granting of licenses to institutions where medical and surgical aid is given gratuitously, or for a nominal fee, for the consideration of the Board of Charities. This committee will meet in this city at an early date, and the ventilation which the subject of medical charters will receive will undoubtedly do much to do away with abuses of a grave character, and at the same time assure more certain relief to the really deserving.

REVIVAL OF THE WHIPPING POST.

GOVERNOR ROOSEVELT, we see, fully endorses the arguments advanced at a recent meeting of the Medico-Legal Society for the revival of the whipping post for certain specified crimes. The argument is that there is a certain class of men so brutal in their instincts that they can only be controlled through fear of bodily suffering. Among this class are included wife

beaters, who are always cowards, and could best be learned a lesson of decency with the cat-o'-nine tails. We respectfully suggest the whipping post for the man who treats his children with brutality, and the removal of the testicles for the wife beater. It is very evident that the wife beater and the wife killer will receive but little mercy from Governor Roosevelt.

As corporations are not always immaculate and sometimes need a little watching, we are glad to see the Governor has signed the bill providing that the corporations for the Prevention of Cruelty to Children and Animals shall be subject to the inspection of the Supreme Court.

LIFE IN THE TROPICS.

DR. ALFRED RUSSEL WALLACE, the author of a recent work on the Malay archipelago, gives an opinion, based upon his own experience and investigation, upon life in the tropics. Dr. Wallace thinks, contrary to general opinion, that the climate in the tropics is more conducive to healthiness for a white population than the temperate region. He attributes his own long continued health, being now seventy-six years of age, to twelve years' residence in the tropics when a young man and threatened with lung disease. He says European soldiers in India have better health than the sedentary native classes; British soldiers in the Soudan stand up to the work; thousands of Australian gold miners endure intense heat, and Hollanders have flourished for generations in the Dutch colonies. He thinks the region on each side of the equator for a thousand miles to be the most healthy and the most enjoyable abode for man, where with the least labor he can obtain the greatest amount of necessaries, the comforts and luxuries of life, and can at the same time develop and cultivate his highest nature. But work is as necessary to health here as elsewhere, the indolent suffering more than in temperate regions.

Speaking of the Philippines, a part of the same archipelago, Dr. Worcester, of the present commission, with far less experience than Dr. Wallace, says: "If one is in a good locality where he can secure suitable food and good drinking water, if he is scrupulously careful as to his diet and avoids excesses of all kinds, he is likely to remain well if he is fortunate enough to escape malarial infection," but concludes with the opinion that this climate is specially severe on women and children, and expresses a doubt if many successive generations of white women and children could be raised there, which would naturally present a great obstacle to the development of the country.

Dr. Wallace's opinion is based on a twelve years' residence in the Malay archipelago and an intimate knowledge of its climate and resources. Dr. Worcester's opinion is based upon a short visit to the islands, during which most of his time was devoted to the study of their flora and their agricultural resources. The government, through its scientific staff, will undoubtedly give to the public the results of its own observations.

ARMY COOKING SCHOOLS.

ONE of the outgrowths of the recent war is the organization of army cooking schools. These schools, located at important recruiting stations, will prove almost as valuable an aid to the army as trained nurses. In the Spanish war the company cooks killed more men than the Spaniards. The life of a volunteer soldier is in more danger from his friends than his enemies. This risk will no longer be run. Under the new regulations a corps of trained cooks will form part of the army, and will be able to prepare food for troops in the field, on the march, and in the hospitals, best suited to their conditions. With an independent medical department having under its control a corps of trained nurses and cooks, the fatality of the hospitals, now so much larger than on the field, would be reduced to a minimum.

THE CENTENARY OF NITROUS OXIDE AS AN ANÆSTHETIC.

THE first practical suggestion leading to the discovery of modern surgical anæsthesia (we say *modern*, because the condition itself is plainly spoken of by several old-time writers), was made just 100 years ago next autumn. At that date a youth named Humphrey Davy was acting as assistant to Dr. Beddoes in the management of an institute established by the latter at Bristol, England, for the cure of diseases by the use of "factitious airs," as gases artificially produced in the laboratory were then called. Here Davy conducted a course of experiments on the respiration of different gases, among which was nitrous oxide, or "laughing" gas. It was in November, 1799, that he put forth the celebrated statement: "As nitrous oxide, in its extensive operation, appears capable of destroying physical pain, it may probably be used with advantage in surgical operations unattended with much effusion of blood." From this hint, almost unnoticed by contemporaries, the anæsthetic methods of our day must be regarded as having taken their rise.

Nearly fifty years later, Horace Wells, the Hartford dentist, recalling the words above quoted, and observing that persons under the exhilarating influence of nitrous oxide tumbled about and

bruised themselves without feeling any pain, was led to make trial of it in the extraction of teeth, with results which are familiar to all. The honor of having first suggested the inhalation of sulphuric ether for preventing the pain of surgical operations belongs of right to our venerable colleague, Dr. E. E. Marcy, of this city, who was also the first to use the knife upon an etherized subject. As connected with the history of anæsthetics his name, therefore, deserves equal mention with that of the great English chemist.

ANÆSTHESIA.

IN Professor Shorburg's clinic in the Julius Hospital at Wurzburg, in Bavaria, iced chloroform has been used as an anæsthetic in over 14,000 cases without a single unpleasant result. The advantages claimed for this preparation of chloroform are the quickness of its action, its comparative freedom from danger, and the absence of the nausea and depression so common with other anæsthetics. The nitrous oxide gas is now becoming very popular in capital operations, to commence anæsthesia, but as it has been claimed that this gas produces serious effects upon the kidneys, Drs. Schall and Mattison are now engaged in a series of experiments upon animals to determine the truth, the results of which we shall give at a later date.

GLAUCOMA CURED BY MASSAGE.

GLAUCOMA is regarded as almost incurable, and hence peculiar interest attaches to an article by J. A. Pratt, in the *Philadelphia Medical Journal* of December 17, 1898, calling attention to the value of massage in this affection. The case reported is that of a colored man who had become blind in one eye, while in the other the sight was becoming poor. He had been treated, but with no benefit. Examination disclosed a typical case of glaucoma. The left eye was blind and stony hard. In the right the tension was about +1 with vision of 20-40, and at times slight neuralgic pains. The right eye had been ailing about two months.

The iris was thoroughly contracted with eserin; a 4 per cent. solution of cocaine was instilled, and then with the back of a hard rubber cataract-scoop the corneoscleral junction was gently masséed with a firm, even stroke, from ten to twenty strokes being made over each place. It is best not to do too much at one sitting, but to be governed by the behavior of the eye. After instilling and prescribing a few drops of a 1 per cent. solution of eserin he was told to return on the third day. The treatment was now repeated, and again upon the second day. At the end of the third treatment the tension was normal, vision was normal, and all discomfort gone. He was told to return in three days, but he remained away ten days. During this time the eserin was continued and hot applications were made, but on the patient's return all the old symptoms were present. This experience demonstrated that the benefit received was due not to the drug but the massage. The treatments were resumed with the same benefit. At present sight is normal and all glaucomic symptoms have disappeared. The blind eye was treated, with a return of the normal tension, but no improvement in vision.

A note on the above case by George M. Gould states that he has had experience in four cases, in which for several years the tension and vision have been kept normal by firm massage with the finger and by means of the lid.

APPENDICULAR LIVER.

PROFESSOR DIEULAFOY (*Semaine Med.*) asserts that any appendicitis, even the most benign, may become the cause of a hepatic infection, manifested by the rapid formation of multiple abscesses by the dozens and hundreds, scattered throughout the liver, transforming it into a sort of purulent sponge, to which he gives the name of appendicular liver. The disproportion is most striking between the tiny closed cavity of the appendix where the toxic infection is elaborated, and the great organ affected by it, in which the microbes, endowed with incredible virulence, may determine such extensive lesions in the course of a few weeks or even days. The hepatic complications of appendicitis appear abruptly, sometimes in the midst of convalescence, commencing with a terrible attack of fever, followed by others, accompanied by pain in the liver and its rapid enlargement, icterus, and frequently vomiting and diarrhœa. Appendicular hepatic infection is always fatal. The only treatment is prophylactic, which consists in operating during the first days, without allowing this complication on the part of the liver time to develop.

BEEF BLOOD AS A VITALIZING AGENT IN DISEASE.

IN an article headed "The Keeping of Kipling," the editor of *Modern Medical Science* reveals what he calls "the peculiar secret" whereby the great author's attending physicians succeeded in rescuing his life from "a pneumonia nearly as fatal in degree as the worst." "Really," he says, "the only problem in such cases is that of sustaining the strength of the patient until time is up for the disease to relax its grasp." The doctor in this celebrated case it seems has for years been quietly using for this purpose a dietary preparation that bears the label Beef Juice, but whose real name is Beef Blood, and which is manufactured and sold by the

Bovinine Company. The writer plainly intimates that Mr. Kipling's recovery was due primarily to the employment ot this agent, but that his doctors have to "hold their tongues" about it for fear of exciting injurious suspicions.

EFFICACY OF MEDICINES INCREASED BY DILUTION.

CAPITAN (*Med. Mod.*; *Bull. of Phar.*) has made a study of the variations in results obtained from different methods of administering medicine, and as a result of a large number of observations, has come to the conclusion that the efficacy of medicines would be very much increased by diluting them more than is now customary. He advises the ordering of soluble medicines in powdered form, and would have the patient dissolve the medicine in a large quantity of an equal part of plain water and carbonated water, when about to take it.

A TRAINING school for nurses in connection with the Post-Graduate School will be erected by Mr. Harris C. Fahnestock, at a cost of $100,000, as a memorial to Mrs. Fahnestock, whose last hours were made easier by trained nurses from the Post-Graduate Hospital. Nurses entering this school will receive a broad education in the Post-Graduate Hospital, the Manhattan Eye and Ear Hospital, the Lying-in Hospital and other institutions. In this connection we notice that the Trained Nurses' United Aid Association has been incorporated and has elected a board of managers which includes some of the most prominent names in the city. The society, of which any trained nurse may become a member, has free rooms at 15 West Forty-second street, and hopes in time to establish a home for nurses incapacitated for work from sickness or age.

PROF. CHANDLER, of the School of Mines of Columbia College, has been elected president of the Society of Chemical Industry, being the first American elected to the presidency of an English scientific society. Dr. Chandler will make a worthy successor of such men as Sir Henry Roscoe, R.A.; Sir Frederick Abel, R.A., and others equally distinguished. In this connection we notice that Dr. Frederick S. Dennis of this city, the editor of the "American Text-book of Surgery," has received the honorary degree of Fellow of the Royal College of Surgeons, England. This degree has never been conferred on an American before, as a candidate in course must have been a member thirty years, and is only conferred on members each year.

BIBLIOGRAPHICAL.

ANNUAL AND ANALYTICAL CYCLOPÆDIA OF MEDICINE. By Charles E. de M. Sajous, Sr., and 100 associate editors, assisted by corresponding editors, collaborators and correspondents. Illustrated with chromo lithographs, engravings and maps. Vol. III. The F. A. Davis Co., publishers.

In the plan marked out by the accomplished editor for this cyclopædia, and carefully carried out in each volume, each disease, including its sub-division, etiology, pathology, treatment, etc., is described *in extenso*, and the new features that the year has brought forth are inserted in their respective places in the text. Vol. I. extended from Abdominal Injuries to Bright's Disease, Vol. II. from Bromide of Ethyl to Diphtheria, Vol. III. from Dislocations to Infantile Myxœdema. The entire work will probably be completed in six volumes, and will present all the general diseases in text books on practical subjects, and, inserted in their logical order in the text, all the progressive features of value during the last decade.

PRACTICAL MATERIA MEDICA FOR NURSES. With an appendix containing poisons and their antidotes, with poison emergencies, mineral waters, weights and measures, dose list and a glossary of the terms used in materia medica and therapeutics. By Emily A. M. Storey. W. B. Saunders, publisher, Philadelphia.

The title of this little work gives a correct idea of its plan and object. We need simply say that the subjects are treated with clearness, scientific correctness, and in a manner best calculated to impress the information given on the mind of the student. Every trained nurse will find it a most useful book.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. Octavo, handsomely bound in cloth. 490 pages. Twenty-eight illustrations and three colored plates. Lea Brothers & Co., Philadelphia and New York.

A prominent feature of "Progressive Medicine" is that it contains personal narratives of medical advances, in which the most important ideas in medical literature are presented in the editor's own language, in a connected narrative. In this process much of comparatively little value, subjected to the critical analysis of well trained editorial minds, is eliminated. In other words, the boiling down process is under the direction of minds well trained in such special work. The four volumes published each year will cover the entire round of practical medicine. One volume will appear every three months, the entire set of four octavo volumes of 400 pages each costing $10.00. The present volume contains "Surgery of the Head, Neck and Chest," by I. Chalmers Da Costa, M.D.; "The Diseases of Children," by Alexander D. Blackader, M.D.; "Pathology," by Ludwig Heckton, M.D.; "Infectious Diseases, Including Croupous Pneumonia," by William Sydney Thayer, M.D.; "Laryngoliga and Rhinology," by A. Logan Turner, M.D.; "Otology," by Robert L. Randolph, M.D.

THE TWO STANDARDS. By William Barry, pp. 516. 12mo. New York: The Century Company, 1899.

Dr. Barry's novel is in no sense a medical one, and entitled, therefore, to a notice in a medical journal; and yet it deals with ideas and subjects to which no medical man or woman should be indifferent.

It is a story dealing with our modern human life, setting forth and illustrating, with living, moving figures, the every day practical, and the ideal, or ascetic side. If we wholly agreed with the author we should have less to say of his book. The book is well written, which goes without saying, since the Century Company would not have published it otherwise; the author is felicitous in expression, and shows much power of analysis and synthesis. Nor is he deficient in knowledge of the world and of those subtle forces which rule the world; albeit we think his judgment is deficient in dealing with them; or in other words, that he is not down or up to date in his knowledge of their bearings.

The heroine of the novel is a young lady of modern feminine instincts, bright, talented, accomplished and beautiful, who is prevailed upon to marry a rich man of the world in order to save her father, a clergyman of the Church of England, from the disgrace of hypothecating the funds of his parish. She soon discovers that the man to whom she has thus been sold is truly a man of the world, to whom the sense of honor to woman is totally vanting. Her moral nature revolts at his perfidy. She did not love him at first; now she loathes him. A woman of ideals, she soon discovers their embodiment in one of the world's master spirits, and seeks to break away—does break away—from a union which is morally hideous to her. In this juncture she falls in with an old friend, a monk, who discerns the situation, and raises before her confused vision another standard of life and living—that of St. Ignatius, of Renunciation. She pauses. Guileless in her thought and purpose, she fears lest her conduct may bring ignominy to the fair name and fame of her lover. The sacramental character of marriage is presented to her; her vow of love and fidelity comes back with new force and meaning to her, and she returns to her husband as one sinning, rather than sinned against, to be discarded by him. In the turn of fortune, her unfaithful lord and master meets with misfortune, and his true character becomes known to the public; he is prosecuted for crime, convicted and sent to prison. This circumstance forms an occasion for the discarded and "erring" wife to play the role of ministering angel. The author makes her renounce the ideal in relation to her lover, to serve the conventional in relation to her husband—a purely legal fiction; to play the hypocrite to her husband, and false to her pure ideals, under the specious guise of renouncing self; in other words, to turn away from the law of the higher self, to obey the man-made law of the social sphere, under the mistaken conception of Renunciation.

We cannot but regard this as a serious shadow on the otherwise fair page of Dr. Barry's book. Self-renunciation is all very well when it means giving up or crushing down or out the clamors of the lower or baser self. It is an error to make a fetish of it, or make it a rule of everyday, practical life on the plane on which we live to-day. It may be easily carried to the point of selfishness, as it was by the mediæval Christians and Pagans, who renounced the world, that needed the consecration of their lives, to become absorbed in themselves in order to save their souls, which were hardly worth the saving from the point of view of to-day. Renunciation for its own sake is never a virtue; to be a virtue it must comprehend an ideal purpose, and the giving up of a vain or idle desire for a more noble or exalted one. Its character, therefore, depends on what it is that is renounced. If it is the impulses of one's lower self, it is a virtue; if it is the claims of one's higher self, it is a vice. If one turns away from communion with a twin soul, to affiliate with a base, unloved or ignoble one, because, forsooth, a ceremony of marriage has been mumbled between them, the act is a reprehensible one, without an element to commend it.

The author, moreover, does not appear to comprehend the ethics of love and marriage. It is high time that the public conscience awoke to the fact that love is the divine predicate of marriage, and its sole conservation; that for the sexes—human, I mean—to unite through the influence of any lower consideration, impulse or desire, is a desecration of a holy relation, and an offense against ethics and good morals, involving, as it does, not only the happiness of the parties immediately concerned, but likewise the happiness and well being of generations to come. The ceremonious union is not a marriage in the divine conception of that compact. There is nothing sacred or holy about it, for as Milton has truly said, "In a union where love is not there can be nothing but the empty husk of an outside matrimony, as undelightful and displeasing to God as any other form of hypocrisy."

We cannot, therefore, accept the author's conception of the ethics of love. He makes his heroine very properly loathe the man to whom she has been married by a priestly benediction, for he was a detestable rake, and characterizes her return to him an act of virtue, moved as she was by pity for him, rather than love, when he was in prison for crime, and wasted to imbecility by disease. This is incongruous. If she loathes him at first, in days of prosperity, how could she love him when sunk in crime and disease? Because he was her husband the author makes the return to him a duty, and the love of him a virtue. But we insist that love is not like a charity, to be given or withheld. Nor is it a sentiment, to be indulged, or not, as one wills. Love has its own laws, fixed and immutable in the constitution of the parties to it, which makes them "one flesh" with the formal ceremonial or without it. Love is conditioned in affinity, and can be no more assumed or reasoned into or away from than chemical affinity, or the attraction of gravity. It constitutes a holy relation between two souls, not to be lightly esteemed or renounced. Whoso says aught else, let him be—not anathema, after the fashion of the ecclesiastics—but pronounced in error, or incapable of comprehending the psychology of the subject.

Dr. Barry's book is a good book in the sense that it does not offend the conventional, or pit itself against the dominant fossilized sentiment on the subject of which he writes.

DAVID ALLYN GORTON.

SOCIETY REPORTS.

SOCIETY OF NATURALISTS AND PHYSICIANS OF JENA.

(Section for Medicine.)

Dr. Matthes presented a patient, convalescent from typhoid fever, in whom, in the third week of the disease, symptoms of an *obstruction of the pylorus* appeared. The patient, who then was not wholly free from fever, began to vomit, collapsed suddenly and greatly, and presented the following picture: Abdomen drawn in, and, in the upper part the tensely filled stomach was felt in violent peristaltic motion. A stomach tube was introduced, and one and a half liters of a blackish fluid of a neutral reaction was drawn off. Under stimulants the patient recovered, but his stomach had to be evacuated several times, as it refilled in a relatively short time. The stomach did not fill up from fluid drunk, but secreted by the organ itself. The patient recovered later entirely. At the present time there is no dilation of the stomach, but slight atony, with a little motor insufficiency, still persists. The speaker thought the complication dependent on a kinking of the duodenum or a spasm of the pylorus. Dr. Albu has observed a similar case and explained it as a primary toxic atony, but in this case this explanation would not hold on account of the violent peristaltic movements. The deep collapse, the severity of the whole clinical picture, permit one to regard this one as an acute dilatation of the stomach. That an actual and persistent dilation did not continue here was thought due to the repeated and energetic use of the stomach tube.

Bremer's Reaction of the Blood of Diabetics.—Dr. Matthes reported on the clinical and experimental investigations which Dr. Hartwig has made under his guidance in the laboratory of the Medical Clinic of Jena. The reaction consists, as is known, in the alteration of the behavior of the red blood-corpuscles in diabetics towards aniline coloring substances. The erythrocytes do not take on the acid colors, but in a mixture, as of eosin and methylblue, become stained with the basic coloring material. The different staining mixtures of Bremer and Goft were experimented with. In niue diabetics the reaction was constantly noted whenever sugar was present in the urine. On the contrary, it disappeared whenever by dietetic management the urine became free from sugar. Also in alimentary glycosuria in dogs, brought about by over feeding with sugar, the reaction promptly appeared and disappeared after discontinuing the sugar. Patients who were not diabetic were examined to the number of thirty, and preferably those with constitutional diseases; for example, three cases of leukæmia and four of Basedow's diseases. The reaction yielded positive results in one case of leukæmia, one of Basedow's disease one of multiple neuritis, as well as in one healthy subject. In all these, however, the reaction was not constant and with repetition of the experiments it gave later negative results. Investigations as to the causes of the reaction showed that treatment with acids or bases alters the reaction, but not constantly. On the contrary, it could be demonstrated with certainty that both direct treatment of the fluid blood which had not been fixated with solutions of sugar, as well as subcutaneous and intravenous injections of grape-sugar would bring out the reaction. In diabetes from phloridzin the reaction is not present, as there is no

increase of the quantity of sugar in the blood. Further, it could be demonstrated that the hemoglobin is the bearer of the reaction. Crystals, as well as solutions of hemoglobin, yield the reaction if they have been previously treated with solutions of sugar. It is interesting to note that these solutions had to be at least 0.1 per cent. in strength, at least to give a positive reaction, 0.2 per cent. is, as known, the highest physiological margin of the quantity of sugar in the blood. Therefore, the speaker regards the reaction as dependent upon the grape-sugar in the blood of diabetics, and not due to a primary alteration of the hemoglobin, as it seems so seductive to assume. There is as yet no explanation as to the positive reaction in nondiabetics.

Dr. Krause read a paper on *a rare form of minor epileptic attacks*. There are minor epileptic seizures where only motor disturbances appear, either in the form of spasms or momentary relaxations. Attacks of the latter order are very rare, and as far as he knows are not mentioned in the literature. Such were very nicely to be observed in two patients of the Psychiatric Clinic of Jena.

The first case was that of a man of twenty-eight, who since 1883 has suffered from epilepsy. Besides his typical and rudimentary seizures he has minor seizures where his knees suddenly give way, or he sinks over sideways, or again he falls suddenly forwards, or, again, his hands all at once fall down, without his consciousness disappearing or being disturbed. These last from one half to one second. Now and then these attacks, which run their course without aura or subsequent symptoms, are complicated with spasmodic phenomena in muscle-groups not affected by the relaxation. These attacks are at times very frequent and appear preferably in series.

The second case is a child of seven, who, in consqeunce of hereditary syphilis, suffers from epilepsy. Fully developed attacks are very rare, but on the contrary, the rudimentary ones, and particularly the salaam-spasms and minor seizures are the more frequent. During the latter there are observed very rarely—five times during eight weeks—seizures which consist in sudden giving way of the knees or a precipitate lunging of the whole body; or, again, a falling of the arms to the side as if they were paralyzed Consciousness is not disturbed. These seizures last at the most a second.

According to the theory of epilepsy set forth by Hughlings-Jackson and modified by Gowers and later by Binswanger, these attacks must be dependent upon inhibitory discharges from the psycho-motor region of the cortex of the cerebrum, or of a part of it, without participation of the remainder. In a portion of the attacks excisory discharges played evidently certainly a concomitant part, as was evidenced by the twitching in the relaxed muscles.

FRENCH MEDICAL SOCIETIES.

(From *Le Progrès Médical.*)

ACADEMY OF MEDICINE.

Combinations of Iodine and Sulphur.—M. Prunier described two varieties of the above. In the first, the iodine is simply dissolved in the sulphur; the second is the iodide of sulphur, in which the iodine is combined with the sulphur. The latter is more active, more caustic, and more difficult to handle; has been largely experimented with when mixed with precipitated sulphur, and deprived of the sulphuretted hydrogen.

New Treatment of Exophthalmia.—M. Roure, of Valence, treats exophthalmia by reduction of the volume of the conjunctival sac, which allows of the replacement posteriorly of the globe of the eye. M. Chauvel showed in his report that this operation may be indicated in traumatic exophthalmia. In the other forms he prefers to address his treatment to the producing cause of exophthalmia.

Appendicitis in the Army.—M. Delonne showed that the statistics given by M. Chamel present a high figure of mortality, which is insufficiently appreciated. Many slight cases cured escape diagnosis. M. Delonne has personally had much more satisfactory results, in eight years at Val-de-Grace; he lost but four that were operated upon; at Chalons thirteen cures in thirteen cases. Intervention is the rule of his practice, but in certain circumscribed foci he makes two operations. The first favors the production of adhesions, the second opens the accumulation two or three days after. This plan, to avoid peritoneal infection in the course of the operation, is a matter of much interest.

Grave Forms of Movable Kidney.—M. Bazy described a cachexia connected with the fall and mobility of the kidney. All medical treatment failed, and nephropexy alone succeeded in giving relief, but only after the lapse of two or three months.

Percussion of the Cranium.—MM. Gilles de la Tourette and Chipault adopted a method of ascertaining the thickness of the cranial walls by percussion. Their method consists of the employment of a small hammer, or, by preference, directly by percussing with the finger. By the latter the sensations of elasticity and resistance are produced. Percussion should always be practiced with the patient having the mouth closed, as the opening or closing of the mouth varies with the results obtained. The experiment should be made upon the living, as the cranium of the cadaver gives a very different effect. Percussion, so practised, enables the experimenter to recognize the fact that the comparative tonality of the cranium is clear in the child, dull in the adult, especially in man, and less dull in age. It is more clear in the frontal and parietal regions than in the occipital, from which it may be concluded that it varies with the thickness of the walls, the cranium of the child being thinner than that of the adult, and the parietal region being thinner than the occipital. Operations upon the cranium establish that the tonality of a cranial region varies with its thickness. We have also concluded that the continuity or discontinuity of the cranial wall has a marked influence upon the sound given by percussion. In those that have been trepanned the sound is clearer on the trepanned side. In two cases of old fracture of the cranium, with slight loss of substance, percussion produced the sound of a cracked pot.

BIOLOGICAL SOCIETY.

MM. Chantemesse and Rez have investigated the blood in erysipelas, and found indications for prognosis. Leucocytosis is abundant at the period of the elevation of temperature, and a rapid diminution of it ensues upon its fall. No case of death was observed when there was the formation of an abscess.

MM. Toulouse and Marchand reported the action of ovarian medication in certain cases of epilepsy. Five were women in whom menstruation varied from the appearance of the attack. The first had an amenorhœa following an emotional seizure and succeeded by the first attack. Two others had never been regular, and the two last had their attacks subsequently to ovariotomy and the menopause. There was no aggravation from the medication in any one of the cases, no interference with the organs of digestion, nor temperature, nor pulse. In three cases menstruation was re-established in thirty-eight and fifty-two days. Vertigo diminished in all; attacks also lessened in number. MM. Gilbert and Weill signalized indicanuria as an isolated symptom of hepatic insufficiency in a tuberculous patient, who had no lesion of the digestive tube, but a large fatty liver, and in whom the administration of the hepatic extract suppressed the indicanuria.

MM. Barbier and Frenkel observed that in the dog antipyrine immediately diminishes diuresis, while salicylate causes marked diuresis.

MM. Josué and Roger have investigated the histological and chemical modifications of the medulla of the bones at different ages, and in staphylococcic infection. The structure and chemical constitution vary with age. Water, which is 75 per cent. in young rabbits, falls to 50 and 32 per cent.; fat increases in inverse progression; from 11 per cent. in the young it attains to 22 and even 50 per cent. Albuminoid and insoluble matters equally diminish. In the young rabbit, under the microscope, the red marrow contains numerous capillaries, the fatty areolæ are small and filled with cells; fat increases and cells disappear as the animal grows older. In large rabbits, inoculated with staphylococci, and on chemical analysis, water increases, fat descends, and albuminoid matter and insoluble substances notably increase in quantity. Histological examination gives same results, diminution and disappearance of fatty areolæ, and cellular proliferation. But in infected animals the eosinophile cells are scarce, while they abound in young, healthy animals.

M. Gouget experimented with intravenous and sub-

cutaneous injections of urine. Animals acquire tolerance of notable quantities of fresh or concentrated human urine. But after tolerance is obtained, even weak intravenous injections produce death by emaciation. These facts resemble what is produced in man when advanced renal insufficiency that has continued latent becomes suddenly developed, and rapidly causes death. The autopsic lesions are visceral, and especially hepatic.

M. Moussu obtained good results by thyroid treatment, in myxœdema, but by the parathyroid there were no effects. He experimented upon animals with powerful doses of the thyroid gland, by which growth was accelerated, but emaciation produced.

MEDICAL SOCIETY OF THE HOSPITALS.

Chronic Icterus Without Coloration of the Urine.—M. Hayem observed chronic icterus in a number of dyspeptics affected with parenchymatous gastritis. The fæces were colored, but no biliary pigments in the urine; they were, however, present in the blood.

Etiology of Appendicitis.—M. Faisans insists upon the grippal origin of appendicitis, basing his opinion upon the frequency of this disease for ten years, during great epidemics of grip, and upon the increase of cases of appendicitis observed every time that the grip assumed an epidemic form.

Spasmodic Paraplegia, with Organic Lesion, and Without Degeneration of the Pyramidal Fasciculi.—M. Rabinski presented three cases of paraplegia. In one there was an angiolitic sarcoma of the choroid plexus of the second ventricle, of the size of a nut. In the second was a fasciculated sarcoma in the upper dorsal region, developed within the dura mater, and as large as a sparrow's egg. The third presented a sclerosis of multilocular plates. M. Gaillard reported a case of dry grippal pneumonia, developed in two attacks, without expectoration. M. Marinesco observed a case of hysterical deafness and blindness with œsophagism.

OBSTETRICAL SOCIETY OF PARIS.

Multiple Malformations in a Child: Spina Bifida, Scoliosis, Pelvic Asymetry, Division of the Arch of the Palate.—MM. Bouchmacourt and Dubusay presented a wax cast of a dried piece of the pelvis and vertebral column of a child that had lived four and one-half days at the "Clinique Tarnier." There were certain anomalies compatible with life. The spina bifida was ulcerated, and extended through the whole segment of the column, below the tenth dorsal, and the whole length of the sacrum, the scoliosis, both dorsal and lumbo-sacral; pelvis flattened, of unequal height on two sides, iliac bones asymmetrical. Radiographic examination of the dried piece showed that dessication produced important deformities of the interior configuration of the pelvis, notably increasing the funnel shape.

Nursing of Albuminuric Women.—MM. Budin and Chavanne—It is very important to know if women who have had eclampsia and albuminuria during pregnancy can suckle their children. Ducros and Cassin, in their theses, deny it. Gannelin, in a work published in 1896, and basing his observations upon women followed, not only during their stay in the hospital, but after leaving it, thinks that they can nurse. Since 1892 a certain number of children of albuminuric nurses were observed at La Charité, La Maternité, and at the Clinique Tarnier. Excellent results were obtained, demonstrating the different conditions of children followed during the first year. The alimentation was exclusively maternal, except in one case, in which 250 grammes of sterilized milk was given for a certain time. Generally the women were rapidly cured of their albuminuria. In some, whose albuminuria persisted for a few months, they nursed nevertheless. In fine, it cannot be said that albumen, even in considerable quantity, is a contra-indication for nursing.

Amniotic Infection Before Rupture of the Membranes.—M. Lehmann—It is admitted that the ovum may be infected in two ways; 1. After premature rupture of the membranes, either by microbes from the vagina, or by micro-organisms carried directly to the open ovum by the finger of the operator or by instruments. 2. The ovum being closed during a general infection of the mother, more or less grave, or of long or short duration; in this case the infection of the amniotic liquid is secondary to the total infection. Two observations were reported, in which, in healthy women, at term, the fœtus suffered, as shown by the feeble action of the heart, and on rupture of the membranes the amniotic fluid was horribly fetid and putrid, which can only be explained by the penetration of micro-organisms into the amniotic cavity.

SURGICAL SOCIETY.

Penetrating Wound of the Abdomen.—M. Tuffier presented a patient who had been operated upon in 1898. She was in the third month of pregnancy, and a ball from a revolver had penetrated the left flank. Laparotomy was practiced one hour and a half after the accident, but although the presence of the gravid uterus interfered, eight intestinal perforations were discovered, which were sutured without effusion of the intestinal contents. Simple operative sequelae and cure.

Total Torsion of the Intestine.—M. Routier—A woman had intestinal occlusion, with enormous distension of the abdomen; operation five days after beginning of the trouble. On making a sub-umbilical incision of the fifth iliac, M. Routier found an enormous intestinal coil with torsion of its mass, the cause of the accident. Upon untwisting the coil, and pressing with the two hands, the contents were voided by the rectum. There was no trace of peritonitis; patient cured. M. Michaux preferred incising the dilated coil, which would make the evacuation more simple. The case was interesting because of the absence of the acute accidents on the fifth day of an obstruction. This is the rule when the obstacle occurs low down; peritoneal reaction is produced more speedily the higher up the obstruction occurs.

Acute Perforating Appendicitis.—M. Quenu showed an appendix taken from a young man who suffered from acute appendicitis; pain at Mac Burney's point, pulse 120. Operation twenty-four hours after beginning of acute symptoms. Appendix free from adhesions, except at terminal extremity, which was attached to cœcum by a slight fibrinous band; cœcum lifted from abdomen; protected by compresses; appendix removed; perforation at extremity; surface yellowish green. After effects slight; in thirty-five hours pulse and temperature normal. This is a new fact, demonstrating advantages of prompt intervention, by which M. Quenu illustrated the formula of M. Dieulafoy. In slight cases operation may be delayed to establish the diagnosis unmistakably.

Arterio-venous Aneurism.—M. Chauvel read a report by M. Colin of a case of arterio-venous aneurism of the superficial femoral, caused by wound from a pistol ball, cured by extirpation of the sac, after ligation of four vascular trunks that emptied into it.

Presentations.—M. Walther presented a young man, who had already undergone several operations for an osteo-myelitis of the lower extremities of the tibia, which in consequence of a fall, had twisted the foot to a right angle. The lower extremity of the tibia had disappeared, and the fractured fibula caused the deviation. Resection of the fibula obtained complete reduction. M. Nelator presented patient operated upon by M. Glautenay for calculus of pelvis of kidney. M. Gerard-Marchant presented a case of aneurism of arteria innominata, successfully treated by ligation of the axillary and right carotid arteries.

M. Bewinier: Patient operated upon for bilateral epithelioma of the breast; cure has continued for a year.

Effects of Ligature of Vessels of the Cord.—M. Monod, *apropos* of a case of sphacelus of the testicle, following a radical cure of hernia, and reported by M. Berger, remarked that ligation of the vessels of the cord may be practised without destroying the vitality of the testicle. He did this in a case of prostatitis, in which there was retention of urine, and difficulty in sounding. Patient relieved, and urine free. M. Reynier believed that ligation of the vessels is more dangerous for the testicle than simple resection of the vas deferens. As regards sphacelus of the testicle, following a radical cure of hernia, M. Reynier saw two cases caused by phlebitis of the veins of the cord. Phlebitis of these veins is very frequent, and produces the large hematomata of the scrotum, often seen after operations for radical cure of hernia. M. Bazy considered the double secretion, external and internal, of the testicle, and said that resection of the vasa deferentia interfered only with the function of reproduction. The testicle continued no less to live, and the genesic sensibility is not abolished, as proved by Sir Astley Cooper by his experi-

ments on dogs. The internal secretion, on the contrary, is due to the integrity of the vessels and nerves of the testicle, which assure the nutrition of the gland. Lesion of the nerves and vessels causes atrophy of the testicles, and as the volume of the prostate is connected with that of the testicle, by practicing angioneurectomy of them atrophy of the prostate is produced. Unfortunately, clinical facts are not yet sufficiently conclusive to pronounce upon the value of surgical treatment of prostatic hypertrophy. M. Monod responded that the discussion did not bear upon the subject under consideration. He had wished only to observe that nearly all the vessels of the cord could be tied, without producing sphacelus of the testicle.

Operative Asepsis.—M. Quenu explained the methods used by him to insure operative asepsis. Compresses and tampons are sterilized by an autoclave, a sterilizing apparatus, and instruments put in a solution of borate of soda and subjected to boiling. Asepsis of the hands of the surgeon is the most difficult to obtain. It is very difficult to remove germs from the skin of the hands. M. Quenu is convinced that the majority of septic accidents following an operation are caused by the hands. Gottstein proved in his clinique that the nurse having charge of the instruments alone had sterile hands. It is necessary to avoid every chance of soiling the hands before operating. For greater security, M. Quenu operates with rubber gloves prepared by Gudendag. Of 237 operations performed in 1897, ninety-eight at the Pasteur Pavilion, there were only fifteen deaths. These results were all the more brilliant as the small operations were not included in the statistics. M. Tuffier, believing that it is impossible to obtain bacterial asepsis, uses gloves only when he has a dirty job. When the hands have touched anything foul they should be washed at once, otherwise if the epidermis is dry, it is very difficult to remove germs. M. Jalaguier has operated with gloves since 1887, which he was compelled to use because antiseptics irritated his hands. The use of gloves is not inconvenient if the operation is not in a deep cavity.

Presentations.—M. Peyrot exhibited an appendix operated upon by M. Souligoux on the second day of appendicitis. It was partially sphacelated, and had determined dangerous peritonitis; patient cured. M. Guinard reported new facts, in which by prompt intervention they found a sphacelated appendix. M. Poirier practiced successfully gastrectomy for cancer of the stomach. Lesions so extensive that it was necessary to remove nearly the whole stomach, leaving about one-sixth. M. Guinard exhibited a long portion of small intestine, taken from a woman affected with chronic occlusion. Laparotomy revealed an enormous tumor, composed of intestine. It had four pockets separated by four contractions; patient cured. J. A. C.

HOSPITAL REPORTS.

HOW TO TAKE THE CASE—HYSTERIA AND ITS TREATMENT—CIRRHOSIS OF THE LIVER.

By Walter Sands Mills, M.D.

A Clinical Lecture Delivered at the Metropolitan Hospital, Blackwell's Island, New York City, March 8, 1899.

While waiting for the first patient to be brought in I wish to say a word as to the value of keeping records of your cases in private practice.

When I first started out in practice, it was my intention to keep records of all of my interesting cases. After some years I began to realize the fact that cases that at the beginning seemed of no special importance had a way of developing into something interesting. When that happened, and I wished to write out the history, I would find that some of the early symptoms had escaped my memory and my record was, in consequence, incomplete.

After considerable thought I adopted the following plan, which for the last five years I have carried out. I never make a prescription, either in my office or at the bedside, without putting down the symptoms prescribed for and the remedy given, in a book that I always have at hand for the purpose. Now, if for any reason I wish to put together the complete history of any case, I have all the data from the beginning. I have found this method to be of very great value to me in my work. It also has a more mercenary value. It has a good effect on the patient, and makes him or her feel that interest is being taken in the case.

There are two other reasons why this method is a good one. In case a bill is disputed, if the patient knows that the physician is in the habit of taking notes at the time of prescribing, and that the items appear in regular order in his book, the book will be accepted as proof that the bill is correct. Again, if suddenly called in in a medico-legal case—a poisoning case, for example—the habit of jotting down everything that one does makes it easier to make notes in the emergency where much may be at stake and where the notes may be of future value.

The first case that I wish to bring before you to-day is a case of hysteria. The history follows:

A. B., admitted November 6, 1898. A woman, aged twenty, native of Russia, single, operator on neckties.

Family history negative.

The patient has had measles, scarlet fever, and diphtheria. Five years ago she had an attack of grip and typhoid fever. Three years ago she had a second attack of typhoid fever. She dates her present trouble from that time.

Menstruation has always been difficult the first day or two, and, probably on account of her various sicknesses, has been more or less irregular.

For some ovarian trouble that was present at this time (November) the patient was operated on.

Since the 1st of January, when my service began, she complained of pains in the abdomen and sensitiveness to abdominal pressure. Pressure does not produce any facial sign of distress. She complains of burning in the stomach. She vomits every day, and claims to be unable to keep anything on the stomach. She sometimes vomits blood. She could not urinate voluntarily, and had to have the catheter passed until very recently. She is constipated.

For a considerable time she could not move and remained in bed all the time. After the diagnosis had been made her food was left outside her door, but always disappeared when no one was looking. The abdomen sometimes swells up before the menses, she says, so that people think she is in a family way. This has not been observed by anyone in the hospital. Trying for reflexes was unsatisfactory, as I could not get the limbs in a relaxed condition. The patient sits most of the time in what would seem to anyone else to be a very uncomfortable position. She sits as though in a doze and is not easily roused.

A diagnosis of hysteria has been made in this case. What is hysteria? The definition of Möbius, adopted by Bartlett and by Osler, is perhaps the best that we have: "A state in which ideas control the body and produce morbid changes in its functions."

Why have we made a diagnosis of hysteria? Let us go over the symptoms and see.

In the first place the patient is always complaining, now of one thing, now of another. The symptoms that distress her the most are the abdominal ones. She has more or less pain constantly in the stomach, and claims that everything she eats distresses her and causes her to vomit. Symptoms like these, if caused by organic trouble, would be very serious. Notwithstanding, her appearance is one of robust health. If she actually ejected all her food, as she claims to do, she would eventually emaciate. As a matter of fact, although this vomiting has been going on for months, she is more than ordinarily plump and well-fed looking. Another thing, the nurse has seen the patient with her fingers down her throat trying to induce vomiting. I have examined some of the vomited matter and have never found anything worse than a little mucus and saliva.

The patient complains sometimes of headache and nearly always of pain in the back and abdomen. Nevertheless, her facial expression is placid, and she looks as though she was very comfortable.

Another symptom that, if real, would be of great importance, was the retention of urine, complained of for several weeks after her entrance into the hospital. She claimed to be unable to urinate without the use of the catheter. This symptom seemed to me to point to an erotic condition

of the mind. It recalled a case narrated to the class in my student days by the late lamented Professor Dowling, Sr. The patient was the daughter of wealthy parents, who insisted that she was unable to urinate without the catheter. From the actions of the girl Dr. Dowling was led to believe that she was shamming. One day he was obliged to dig out the urethra. He kept the plug taken out, had it analyzed and found it to be plaster of paris. The girl had inserted it that she might be catheterized. The patient before you did not go to such extremes, but she did insist on the catheter. My suspicions in her case were further aroused by her actions while undergoing a physical examination of the chest. There was absolutely no room for doubt after I had made a vaginal examination in a search for any local genito-urinary trouble that might exist. I found an excessive sexual hyperesthesia. The use of the catheter was stopped at once and the patient has since flourished without it.

Examination for hyperesthesia or anesthesia of the skin has been very unsatisfactory. So has examination for the reflexes.

The patient professes to be unable to walk. I believe she could if she would.

She sits in an apparent doze most of the time and is very uncommunicative. She has talked with me a good deal more I believe than with anyone else.

There is probably some hysteria back of this woman's condition. I will also give her credit for being somewhat of a humbug. It must not be forgotten that she is a woman and a young woman. Hysteria is much more frequent in women and usually develops before the thirtieth year. This patient is now but twenty and she has been sick for five years. She gives a history of two attacks of typhoid fever. Hysteria is frequently preceded by an acute infectious disease. Again, a woman with her sexual erethism, who has never been married or who has never been a prostitute, must be a mastubator. There is no question in my mind that this erethism was the reason for her insistance on the use of the catheter. She has probably frequently gratified her sexual appetite. This of itself is or may be a potent factor in hysteria.

As for treatment, I hardly know what to say. I wish, however, to enter a protest against removal of the uterus or ovaries in cases of this nature. Hysterectomy and ovariotomy have been performed too many times as a measure of relief for hysteria, and often with disastrous results. Such serious mutilation should be performed only for undoubted organic lesions that cannot otherwise be benefited. I have seen too many nervous wrecks made by the gynæcological surgeon to place any faith whatever in the removal of the uterus or its appendages for purely functional or nervous disorders. Moral treatment is what is needed. The knife is worse than useless.

The second case has as yet admitted of no positive diagnosis. The history in brief is as follows:

C. D., admitted January 26, 1899. A woman, aged twenty-six, native of Ireland, single, a domestic.

Family history good.

Had grip five years ago. Two years ago she had a miscarriage. After that she was in hospital for some weeks and was operated on. Probably curetted at that time. For the last year or so she admits having drank heavily. She has also been living an irregular life in other ways as well.

This patient had been feeling badly for some weeks before admision. When she came into the Metropolitan, she was jaundiced, had no appetite, complained of considerable nausea, but no pain; bowels regular. She had a slight cough, worse at night.

Since that time she has steadily emaciated. The pulse has become rapid and weak. The temperature has varied from 101° to 103°. It has no regular remissions or exacerbations. The jaundice has never disappeared. She has at no time complained of any pain in any part of the body. nor are there any points of tenderness. The patient is very constipated and has a movement only after an enema or cathartic. The stools are hard and dry, of a light yellow color, and are passed in small round masses, intermingled with some watery fæcal matter.

Appetite is poor. Occasionally she vomits after eating. The liver and spleen are enlarged. The cough continues. There is probably some pulmonary phthisis.

As stated above, no positive diagnosis has been made in this case. We have a patient who is very ill and who is not improving. She has a weak, rapid pulse and a continuously high temperature. She is young—twenty-six—and is here away from home and friends. Although unmarried, she has had a miscarriage, which left her in hospital in Springfield, Mass., for two months. She admits that recently she has been dissipated. She has drank considerably more than was good for her, and has not been particular about the quality of the drink. She has slept considerably less than was good for her, and has not always been particular about her bedfellow or her bed. She has not been working and has kept very irregular hours. And now, to help make life pleasant for her, her conscience tells her that she has brought her troubles on herself by her wayward habits.

She says the first thing that she complained of was of feeling weak and tired. After a while jaundice developed and she sought hospital aid. Since coming in she has at no time complained of pain in any part of the body. She has had no headache nor abdominal pain. She merely complains of feeling weak and she has this jaundice.

In a general way there are two kinds of jaundice, the obstructive or hepatogenous, and the non-obstructive or hematogenous. Where the jaundice originates in retention and absorption of bile the stools are pale. Where the jaundice originates in disorganized blood the stools are darker and of a more natural color. In this case we have pale or clay-colored stools. We may, therefore, safely say that the jaundice is of hepatogenous origin.

This is not a case of simple catarrhal jaundice. This woman has a rapid, weak pulse—about 120. She also has a high temperature—101° or more. There have been two remissions in this temperature at intervals of several weeks. The temperature has been taken every four hours night and day, so that each of the remissions noted must have been of less than eight hours' duration. In simple catarrhal jaundice we have a slowing of the pulse, it may be to fifty or less. We also get a sub-normal temperature, 97° to 98°.

Malaria has been suggested as a possible reason for the continued high temperature. There is no regularity about the variations, nor have I ever seen a malarial temperature that acted at all like this one. Moreover, quinine has no effect whatever on it.

Gall stones are hardly at the bottom of the trouble, because there have been no paroxysms of pain, nor can any tumor or tenderness be made out.

Probably nothing in the way of a tumor has had anything to do with the jaundice, because, as I have just said, no tumor has been made out. The enlargement of the liver seems to be uniform.

It may be a beginning cirrhosis with enlargement of the liver. The patient gives a history of alcoholism and irregular living, which might be predisposing factors in cirrhosis.

Abscess seems hardly probable, as the patient has been under observation for over six weeks, with no development of localized pain or tenderness.

It seems hardly possible that the case should be due to accumulation of fæces. Enemas and cathartics, especially calomel, have been used a number of times.

The patient is retrograding, there is no doubt about that. Unless something can be done, and be done soon, to relieve her, the diagnosis will have to be made post-mortem.

There is some trouble in the upper lobe of the right lung. It seems hardly enough advanced to cause so rapid or so weak a pulse. The temperature has not got that regular rise and fall that we find in pulmonary tuberculosis.

The cause of the pyrexia is probably an infection of some sort. The tubercular condition and the hepatic condition combined make an obscure case. We know that cases of jaundice, if uncontrolled, run into a chronic condition of pyrexia, emaciation, and death. My prognosis in this case is not reassuring.

The New York Society for the Relief of Widows and Orphans of Medical Men, instituted in 1842, shows in its annual statement for 1898 total assets of $230,781.11. This is one of the best charities we know of, confined exclusively to our profession. It deserves to be better known.

The initiation fee is $25, and the annual dues $10. Every widow of a member in need shall be entitled to $400 per annum, and every male child under sixteen, and every female under eighteen years of age, $100.

CORRESPONDENCE.

To the Editors of THE MEDICAL TIMES:

Among the first people I met in Berlin was Dr. Wardell Stiles, scientific attaché of the American Embassy, and well known in the United States as the foremost authority on parasites. Americans may congratulate themselves that those interests in whose behalf Dr. Stiles is conducting investigations are so well cared for abroad, as Dr. Stiles is thoroughly conversant with European scientific life and methods.

When I arrived in Berlin the Feriencurse fur Practische Aerzte were in progress, and among the attractions were the course in physical diagnosis under Oberarzt Zinn, and the course in laryngology at the Charitié, in which clinical facilities are grand as regards access to patients and their number. Thoroughness in instruction, beginning with the very rudiments and leading higher, is also very noticeable.

The twenty-eighth congress of the German Surgical Association met in the "Langenbeck-Hause" on the 5th of April, and if of interest I can furnish you with brief notes from the proceedings.

Here in Freiburg, in Baden, where I now am with Kraske, of rectal and cocygeal operation fame, the Sommer-Semester has not yet begun, but there are daily clinics. This being one of the world's goitre districts we had four excisions and escapsulations in the space of two hours. All except one were located laterally from the median line, and were rather small. Kraske says that only those which are true hypertrophied thyroids yield to medication. He operates with the patient in the sitting posture, with slight recumbency. One enormous goitre situated in the median line and complicated with numerous deep seated smaller nodes and a calcareous lump, he removed entirely under cocaine, applied hypodermically primarily, and without any subsequent application, and without a murmur from the patient. Substernal goitres are said to be common here.

Very truly yours,

H. O. SOMMER, M.D.

Freiburg University, Baden.
April 19, 1899.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine, New York, Etc.

Rheumatism in Children.—Among those who have studied rheumatism in children most carefully and have done most to correct older errors of belief regarding it (says *Archives of Pediatrics*) is Dr. W. B. Cheadle, of London. In a recent article on treatment, he describes the various peculiarities of the disease in the young. He refers particularly to the fact that the risk of cardiac complications in acute rheumatism is in inverse proportion to the age of the patient. Hence the great importance of an early and correct diagnosis of rheumatism in children. But such a diagnosis is, unfortunately, often very difficult to make, and not uncommonly acute rheumatism is only thought of as a cause of some childish ailment when irremediable damage has been done to the heart by an endocarditis or pericarditis, which has run an insidious course. And yet, if sought for carefully, there are in nearly every instance certain symptoms which ought to suggest the true nature of the ailment.

The mistakes made in the diagnosis of acute rheumatism in children arise chiefly from the fact that in this class of patients the symptoms of arthritis, acid sweats and pyrexia, to which we trust chiefly in diagnosing the disease in older people, are less prominent. The disease runs what in the adult would be called a sub-acuté course. In acute rheumatism of early life arthritis is at its minimum; endocaditis, pericarditis, and chorea at their maximum; pleurisy, tonsillitis, and the vaso-motor and hemorrhagic phenomena, the erythemata and purpurs, are more common, tending to decline as puberty is passed. There is also a special tendency in children for the various phases of the affection to arise independently and apart from one another. This is an important point, which Dr. Cheadle was one of the first to point out. Endocarditis or pericarditis may arise in a rheumatic child not only without any accompanying joint affection, but, in rare instances, without any recognized rheumatic phenomena to give warning of the nature of the true complaint. When a case of endocarditis or pericarditis arises in a child there is always a strong *prima facie* presumption that it is rheumatic. If, with the cardiac affections, we have chorea, fibrous nodules, tonsillitis, erythema or pleurisy, whether these have occurred recently or have cropped up at intervals through months or even years, the cardiac inflammation is, almost certainly, rheumatic. Subcutaneous nodules, by themselves, are pathognomonic of rheumatism. The existence of a family predisposition is of great significance. As the heart affection is so serious in children this organ should be carefully examined whenever any of these rheumatic symptoms are met with, and in every feverish attack, simple though it may appear, the condition of the heart should be regularly ascertained.

A. C. Cotton, in the *Medical Standard* for October, 1898, says that the treatment of rheumatism, particularly in children, really resolves itself into the question of the treatment of endocarditis. This he believes to be especially true, owing to the want of demonstration that any treatment of acute inflammatory rheumatism, except the prophylactic, will prevent the subsequent lesions of the endocardium. . . . Does anyone question the necessity for reducing the activity of the diseased heart to the minimum of physiologic requirements?

The means of accomplishing this, within certain limits, every physician has at hand; so, too, every practitioner has his favorite agents. Rest in recumbent position, freedom from disturbing influences, free action of the emunctories, maintenance of nutrition by a simple diet which will least tax the digestive apparatus—in other words, maintaining the activity of the system with the greatest possible economy of heart action—any remedial agents that will assist in accomplishing this end and are not contra-indicated should be exhibited. Their employment must depend upon the special needs of the case. So, too, with remedies directed to the heart itself. An arhythmic and failing pulse may require strychnine, alcohol, digitalis, etc; and pain, opium.

Painless Treatment of Carbuncle.—Dr. Sol. W. Rosenbaum (*N. Y. Med. Jour.*) describes a simple, painless method of treating carbuncle, introduced by Dr. George H. Swinburne, and which the writer has followed at the Good Samaritan Dispensary in over 200 cases, with uniformly good results—never having septicemia or pyemic sequelæ. (In those cases which are soft and soggy the following solution is used as an abortive:

℞ Glycerine	℥j
Salicylic Acid	ʒ v
Borax.	
Boraic Acid	aa ʒ iiss

M.

Fold a piece of aseptic gauze until it forms a thickness of six or eight layers, the surface area to be somewhat larger than the carbuncle to be covered. The gauze is first thoroughly saturated with Thiersch's solution, then covered with a layer of 10 per cent. ointment of ichthyol, and then applied to the carbuncle. A piece of rubber protective, large enough to overlap the gauze, is now placed on the same to keep in the moisture. A layer of cotton is placed on the protective, and then the bandage is applied and allowed to stay on for two days. When the patient returns to be rebandaged and to have the dressings renewed the cores are found to have separated from their respective walls, and at the next re-dressing, which is again in two days, they are found entirely separated and can be easily and painlessly removed. At the next visit granulation has passed the primary stage, and healing quickly results, leaving an almost invisible scar. The only constitutional treatment found necessary was to give cathartics, like fluid extract of cascara sagrada or castor oil, and, in individual anaemic or cachectic cases, compound syrup of the hypophosphites.

With this simple but very effective treatment, Dr. Rosenbaum summarizes the following advantages:

1. Painlessness (a great factor with many patients).
2. Quickness of healing, more so than with other methods.

3. No scar or cicatrix remaining—important when carbuncles are on visible parts.

A dispensary patient had a carbuncle situated on the median line of the back between the scapulæ, measuring in diameter 4⅞ inches; complete measurment, including the zone of inflammation, reached seven inches. He was cured in five visits, coming every second day. Hardly any pain was suffered during treatment, and no cicatrix remains.

The Hot Air Bath.—There is one agency (says the *Journal of Hygiene*) which accomplishes many of the results that different drugs are given to produce, and this without the reactive effect of a drug—an agent which is always delightful, soothing and quieting to the irritated nerves. That agent is the hot-air bath. This bath in the gentlest manner causes the skin of the bather to discharge the refuse of his system, the process of unloading going on steadily and constantly. Thus the causes of disease are thrown off. Even a small amount of alcohol in the system can be detected by the odor of the perspiration thrown off during this bath. The blood is equalized, and congested organs relieved. The whole system is vivified by the purified blood stream, and life's processes of building up and breaking down go on more rapidly under the influence of hot air. Half active lungs regain full action, the cloudy brain becomes clear, and its pristine activity reinstated. The primary action of the heat is to relax the tissues, thus inviting a more perfect distribution of blood. Every organ is quickened, and secretion and excretion are more thorough and complete. Thus is established the most perfect system of sewerage of the body.

The secondary action is that resulting from sweating. Water from the blood, used-up tissue and poison held in solution, are rapidly expelled from the body. The heart is relieved by lessening the volume of the blood and dilating the peripheral arterioles. Torpidity gives place to activity, and, furthermore, no living tissue or vitality can be extracted by this process. Nothing is thrown off but what the system is better without. No poison is left behind, as is the case when drugs are administered. On the contrary, the individual remains in a calm and quiet frame, both of mind and body.

The effect of the hot-air treatment is to reduce inflammation by purifying the blood, and thus relieving the craving for stimulants, which only perpetuate and increase the disease.

A man purified by one of these baths at once realizes that he is on a higher plane. His senses are more acute, he is in his best condition, he respects himself so much the more, and is less liable to return to his bad habits.

A Note on Holocaine.—Dr. William F. Norris, of Philadelphia, says that it is well known that holocaine has found tolerably widespread acceptance as a local anæsthetic for the cornea and conjunctival sac, and that claims have been made for it as an antiseptic and germicide. He has used it in a considerable number of cases in both hospital and private practice, and has been specially gratified by its effects on corneal ulcers. In several such cases which have for many weeks dragged along with slight progress and frequent relapses, great improvement has been manifested from the use of holocaine, as shown by rapid diminution of the infiltration area, and later by healing of the ulcer. The method of application has been by flushing the conjunctival sac with a 1 per cent. solution, and by touching of the floor of the ulcer with a little cotton swab saturated with it. It has been a question in his mind whether holocaine was really a germicide or whether it simply afforded a medium which was unfavorable to the growth of microbes. He therefore called in Dr. D. H. Bergey, of the Laboratory of Hygiene of the University of Pennsylvania, who found that a 1 per cent. solution of holocaine applied to staphylococcus colonies had no effect in half an hour, but killed all of these microbes in two and a half hours. A 1 to 1,000 solution of mercuric bichloride has a nearly similar effect; for two hours after the application the staphylococci were still alive.

Local Treatment of Diphtheria.—A Swedish physician N. England (*Sem. Med.*, Jan. 18.), whose practice is remote from a large town, and who finds it impossible always to obtain diphtheria serum when needed, has been so successful with local treatment that he has only lost three patients out of 197, a mortality of 1.52 per cent. His method is the simultaneous use of trichloride of iodine, which Behring and Kossel recommend for rinsing the mouth in diphtheria, sodium sozoiodolate, sulphur and ferric chloride. The formula for the gargle is: Trichloride of iodine 5 gm., aq. dist. 500 gm., saccharin .50 gm. Dilute with ten parts water and gargle ten times a day. Insufflate into nose and throat. After each gargle a powder composed of sodium sozoiodolate 5 gm., sulphur 15 gm. for internal use. Administer in addition fifteen to forty drops ethereal tincture of ferric chloride four times a day.

A New Device for the Arrest of Post Partum Hemorrhage.—Arndt (*Muench. Med. Woch.*, No. 43, 1898, p. 1390; *M. & S. Rev. of Revs.*) proposes a new treatment for atonic uterine hemorrhage. Though deaths from post partum flooding are not so common as formerly, now that the manual expression of the placenta has been limited to suitable cases, Duehressen's statement that in Prussia alone there is probably one death a day from this cause, shows the need of a reliable method of treatment. Duehrssen's tamponade is valuable, but is not without danger.

Arndt's treatment consists in seizing the flaccid lips of the os with one or two bullet-forceps, and forcibly but slowly drawing the uterus downwards as far as possible. This is repeated three or four times, until all hemorrhage has ceased, and the uterus is firmly contracted.

This mechanical device acts, firstly, by rendering the uterus anemic. This has long been known to operating gyneæcologists. Secondly, it not only arrests bleeding at once, but stimulates the uterus to contract, and prevents its further relaxation; partly by the irritation of the automatic ganglia in the middle layer of the uterus, and by stretching the uterine nerves in the broad ligaments, partly because anemia of the uterus is one of the strongest stimuli to contraction.

The great advantages of the method are its certainty, simplicity, and—with the most elementary precautions—avoidance of sepsis.

Ipecacuanha in a Case of Epilepsy.—C. Knox Bond, in the *Lancet* of September 17, 1898, reports a case of epilepsy treated by ipecacuanha, in which a very satisfactory result was obtained. The patient was an unmarried woman, aged twenty-nine years, who had been subject to epileptic fits from the age of eight. She had been variously treated from that time until July 14, 1897, when she presented herself at the St. George's and St. James's General Dispensary. It was found that she had taken continuously for a long period large doses of bromide without, according to the statement of her mother, diminishing the number or severity of the fits. It was deemed advisable to reduce the bromide to a third of the former dose, and wine of ipecacuanha was added to the prescription. Ten minims were first given and increased from time to time as the fits recurred, until a dose of forty minims three times a day was reached. With each increase of ipecacuanha there was a marked improvement in the patient's condition. The severity and frequency of the fits diminished, and since May 3, 1898, no fits whatever have occurred. The patient's mother stated that her daughter had never enjoyed so long an immunity from fits at any previous period since their commencement. The reasons which led to the adoption of this treatment were based, firstly, on observations made in private practice as to the value of ipecacuanha in convulsive attacks of children, apparently due to gastro-intestinal irritation; and, secondly, it seemed a likely remedy to check the voracious appetite and neglect of mastication so frequently observed in epileptics.

Chloroform Externally During Labor.—Dr. Archangelsky (*Vratch*) says that for several reasons the external application of chloroform to the abdomen in severe and irregular labor pains is superior to chloroform anæsthesia. He employs a mixture of one part of chloroform to two or three parts of olive oil, rubs it in well on the abdomen, and then applies a warm compress. In a very short time the pain is relieved, the contractions become regular and more effective. Its advantages over chloroform anæsthesia are: The patient remains fully conscious, the pulse and the respiration remain good; there are no nausea, no vomiting and no uterine atony.

Massage in Infantile Constipation.—If constipation occurring in babies is not relieved by diet, Casson de La Carriere (*Med. Bull.*) recommends light massage of the abdomen with the palm of the hand well oiled. Light pressure should be made, and the movement in a circular

direction about the umbilicus. For children over one year old massage may be made with the finger tips over the course of the large intestine from right to left.

Ringworm of the Scalp Treated by Sodium Chloride.—Dr. Perkins writes to the London *Lancet* that for fifteen years he has treated every case of ringworm which has come under his care with chloride of sodium, and with complete success. The first case in which he used this treatment was a chronic one of five years' standing. The child was well in three weeks and had no return. Many of the cases which have been attended since have been of chronic character. His method is the following: Have some chloride of sodium finely powdered and then mix with a little vaselin to make an ointment. The affected part having been shaved, rub this ointment in well night and morning until the place is sore. This takes from two to four days. Then use some simple application to aid the healing of the part. When well from the soreness, the hairs will be found growing healthily and the tinea tricophyton destroyed.

RETROSPECTIVE DIETETICS.

Absorption, Without Digestion, of Milk.—A method is advocated by Dr. L. Duncan Bulkley, of feeding milk in cases of weak digestion and intolerance of milk, which *Modern Medical Science* declares to be "as sound in physiology and successful in practice, as its object is important." The problem involved, as stated by the author, is to introduce the milk in such a manner that there shall be no stomach activity and no secretion of gastric juice. "Plainly, then, it must be given quite apart from all solid food, or any substance or condition which could excite gastric secretion. Even the least amount of acidity from a preceding meal would coagulate some of the milk and so start on the whole process of caseation and digestion.

"Since the blood is akaline, the chyle alkaline, and normal milk also alkaline, if the milk be presented to the absorbents in an alkaline state, under the alkaline condition of the stomach, and at the bodily temperature, absorption takes place immediately, without the intermediate process of digestion.

It will often be difficult to be sure that the stomach has reached the alkaline condition at which only the milk can be taken with advantage. The general rule is not to have it taken longer than an hour before the coming meal. Occasionally, if the digestion is sluggish, it is necessary to administer pepsin or other digestives freely and repeatedly, to secure an empty stomach early enough; and at times when there is any doubt, I have taken one or more doses of bicarbonate of soda half an hour or so before taking the milk. It is also often advantageous to put a little bicarbonate of soda into the milk, if there is any question as to its perfect alkalinity or as to the alkaline state of the stomach. But these measures will not be successful if there is food or any remains of an acid digestion.

"The temperature of the milk is also an element of importance. The effort to warm cold milk in the stomach will often give occasion for an attempt at stomach digestion. My directions, therefore, are that the milk shall be made of the body temperature, by heating it carefully in hot water, if possible; if boiled, its acts prejudicially by exciting gastric action, and the aim of the process is defeated. It is often desirable to warm the milk by the addition of hot water; its absorption is even more readily effected thus than when the milk is too rich and thick.

" . . . Constantly, those who have been quite unable to use milk in the ordinary way, have followed the plan proposed, with the most satisfactory results. In the author's own person, milk taken in the ordinary manner and with food invariably disagrees, causing sick headache and functional liver disturbances; whereas, following the plan proposed, he has taken a quart of milk daily for ten and more years with the greatest benefit. I could give many, many instances where the transformation of the patient by this simple procedure has been really marvelous.

"The soporific qualities of warm milk at bedtime or in the night are sometimes remarkable. It is also an interesting fact, based on physiologic reasons, that when thus taken successfully, it greatly improves the appetite. . . . . By the quick absorption of milk the pressure of the blood in the capillaries is increased, and a richer blood is offered for the production of the gastric juice."

Dr. F. H. Wiggin says: "If an operation is to be performed at an early morning hour (*i. e.*, 8 A. M.), the patient should be given a peptonized milk punch at 11 o'clock the previous evening, and if he awakens at 5 or 6 A. M. one ounce of liquid peptonoids may be given, but nothing more. It has been the writer's experience that a small amount (one ounce) of stimulating and concentrated food, administered about two hours prior to the taking of the anæsthetic, diminishes the liability to heart failure, and also lessens the nausea and vomiting which frequently follow the return to consciousness. If an afternoon hour has been decided upon, another peptonized milk punch may be given the patient when he awakes, and one ounce of liquid peptonoids at 11 A. M."

The Disadvantage of Sterilized Milk.—While a year ago, says the *New England Medical Monthly*, no one ventured to question the superiority of sterilized milk, we have noted recently a falling off of enthusiasm regarding this preparation; in fact its use in some quarters has been almost entirely discontinued.

Carstens, of Leipsic, in a paper read at the Duesseldorf Congress, discusses this subject at length and gives a very satisfactory resumé of the advantages and objections connected with the use of sterilized milk. The chief conclusion reached by him is that the continuous and exclusive use of this product by infants leads in a large number of cases to impairment of nutrition, as evidenced by the existence of anemia, rachitis, scurvy, etc. In addition to the physical and chemical changes produced by sterilization, the necessary uniformity of the food is shown to be an injurious factor.

Of course there are many conditions which render sterilization a measure of necessity, but on the other hand, it has been found that fresh, clean, slightly cooked milk gives equally good results and is, besides, the nearest substitute for mother's milk.

An Inexpensive Baby Food.—Dr. C. E. Greene, in the *Medical Council* for May, gives the following directions for preparing "a nourishing, easily digested, and sterile infants' food, at an expense of from five to ten cents a day.

For twenty-five cents there can be obtained from any brewery a peck or more of malted barley or, as it is commonly called, malt. This is to be taken to the grocery and ground in a coffee mill to a fine powder. This powdered malt may be placed in fruit cans for use when required. Then take a small amount of wheat flour, one quart, for instance, and brown on a hot stove, using a bread tin or frying pan for the purpose. The flour should be stirred constantly during this process, not allowing it to scorch, till it becomes of a light yellowish color.

Then, for a child one month old, take one pint of milk, two pints of water, one tablespoonful of the brown flour, three-fourths tablespoonful of ground malt, two teaspoonfuls of granulated sugar, ten grains of baking soda, ten grains of salt.

Mix the above articles, and place in a double boiler, or in any vessel that can be placed in a kettle of water, that should be brought to very near the boiling point and kept at that temperature for fifteen or twenty minutes. Then strain and keep in a cool place for the day's use.

Of course, the best article obtainable of cows' milk and water is to be used. The relative quantity of milk and water to be used should be varied according to the increasing age of the child.

The amount that a child should be given during twenty-four hours must be determined according to the individual case by the judgment of the physician. Some babies are able to digest much more than others of the same age. Remember that more babies are overfed than underfed.

The usual directions as to frequency of feeding and the care of the nursing bottle and nipples should never be neglected.

Chocolate: A Valuable Dietetic and Therapeutic Agent.—Chocolate is an invention of the Mexicans, who adopted it as their national beverage. In 1520 it first became known in Europe. Its process of manufacture from the seeds or kernels of the theobroma cacao, was, however, kept a secret by the Spaniards, until Carletti, of Florence, in 1606, made it known to the world.

According to Dr. Theodore W. Schaeffer (*Dietetic and Hygienic Gaz.* Feb., 1899), the seeds, when deprived of

their husk, contain more than half of their own weight of fatty matter (cacao butter), a large proportion of starch, a nitrogenous substance resembling gluten, together with gum and theobromine, a basic principle very much like caffeine, but containing more nitrogen than the latter.

Manufacturers do not uniformly extract the fat from commercial chocolate.

From the composition of the seeds we perceive that, when consumed in the form of chocolate, they possess a far greater nutritive value than simple infusions of tea and coffee. When used as a beverage, it is difficult to discern any of the stimulating qualities which belong to theobromine, a substance which was first discovered by Wosrensky in 1841, and which is not very soluble, hence acts very slowly and uncertainly upon the animal organism. Chocolate certainly possesses a positive nutritive value far beyond that of its mere stimulating action.

The action of theobromine upon the muscle and the central nervous system has been studied in recent times by Filehne, who compared it with the action of xanthine and caffeine. He arrives at the important conclusion that the chemical series, caffeine (trimethylxanthin), theobromine (dimethylxanthin), xanthin, similarly exhibits a pharmacological series of actions.

The cacao bean is not only a confection, but at the same time a very valuable article of food. In addition to half of its own weight of fat, it contains fully twelve per cent. of albumin. Chocolate should be used in provisioning the army in case of war. It is hardly possible otherwise to carry in such a small compass so much nutriment. Chocolate prepared with milk is more palatable than chocolate alone and is very nutritious.

Chocolate, containing in a readily assimilated form all the fat producing properties, makes an eligible substitute for cod liver oil, being a reconstructive of inestimable value. One of its soluble salts, the salicylate of sodium and theobromine—known under the trade name of diuretin—is used as an active diuretic in the treatment of various dropsies, not irritating the kidneys.

In individual cases the use of coffee is injurious, as occasioning a lax condition of the bowels. Besides, if used to excess, it is liable to excite disturbances of the stomach and nervous system, producing eructations, headaches, etc. Quite often persons are made costive by the use of coffee. In diarrheal complaints it frequently aggravates the trouble.

In the disorders just referred to, chocolate, when properly prepared, can be advantageously substituted for tea or coffee.

Arterio-Sclerosis—Its Dietetic Treatment.—Bock (*Zeitschrift f. Diaetet. und Physikal Therapie*, 1898, II., No 1; *Med. Rev. of Rev.*) declares that arterio-sclerosis is a true disease. It begins during the forties, and may even appear in the thirties. It is both more common and more dangerous than valvular disease, a fact not sufficiently appreciated. It is not amenable to remedies; while energetic purgation and venesction may temporarily relieve, diet alone holds out a prospect of cure. Diagnosis is not difficult; it is sufficient to find permanent increase of blood pressure with permanent augmentation of the heart's action.

Very different classes of people are predisposed to this disease. 'First may be named good livers who suffer from plethora. The very opposite class of half-fed and emaciated poor folk are also prone to become arterio-sclerotics; here the causes are purely psychical—worry, etc. Men who speculate, brokers, bankers and those of similar occupations, are also predisposed, while a fourth class comprises men who do hard manual labor and at the same time use alcohol to excess. Scoliokyphosis constitutes a special predisposition, due to the narrowing of the thorax, and consequent elevation of the blood pressure of the pulmonary circulation. Finally, arterio-sclerosis is often inherited.

In general the diet should aim to cut down ptomaine- and leucomaine-producers on account of their deleterious action upon the vessels, and nucleo-albumins should be eliminated as far as possible. The following meats are permitted as being poor in nucleo-albumins: so-called white meats, including veal, chicken, lean pork and lamb. Beef may be allowed only when thoroughly cooked. These white meats may be replaced by liver, kidneys, etc.; the latter are poor in albuminoids, and tend to prevent the organ-albumin from decomposition. Of vegetables, only those are permitted which do not form much gas—spinach, cauliflower, string beans, etc.

An arterio-sclerotic should never eat to repletion, because a distended stomach is a mechanical irritant to the heart; for the same reason all gas-producing food is to be excluded.

Alcohol, being a heart stimulant and vascular poison, should be avoided, with the exception of a little red wine or well-fermented beer, and even these are contra-indicated in advanced stages of the disease. Strong tea and coffee are forbidden.

Boch gives numerous special directions, menus, etc.

Nourishment by Intravenous Injection.—Lilienfeld (*Zeitschr. f. Diaet. u. Physikal Therapie*, 1899, II., No. 3, *Med. Rev. of Rev.*) has made numerous experiments upon the results of injecting solutions of grape sugar into the veins of rabbits for nutrient purposes. He thinks he has satisfactorily demonstrated the practicability of this method, and that alkaline solutions of the sugar are especially adapted for nutriment.

He also experimented less successfully with albuminoids and finds that their use is not free from danger, and that much care should be exercised. Many of the albuminoids appear to be adapted to this use and especially conglutin in solution.

Lilienfeld thinks that there is a future for this method in desperate cases of inanition, such as that incident upon stricture of the esophagus, bulbar paralysis, etc.

A New Fad in Diet Reform.—The "Simian School," of Michigan, tends very closely to strict vegetarianism. They grind nuts into various flours and meals, make combination foods of nut meals and dried fruits, issue recipes in which the chief ingredients are nut meal or flours, fruits, fresh and dried, honey, sugar, milk, cream, butter, cheese and buttermilk. Most of the followers object to meat as a food, but tolerate it when employed medicinally. Their system appears to be based, in part at least, upon what they suppose is taught in the Bible.

A New Theory of Acclimatization.—Dr. Koerfer, in a German medical publication, proclaims that if Europeans would leave their pork fat, their meats, and their alcohol at home with their furs and heating stoves when they go to reside in the tropics, they would avoid all the disturbances that are erroneously ascribed to the climate, but which are, in fact, only due to failure to conform to natural laws. He considers that nature makes the food conform to the climatic conditions from the fish-oil polar zone, through the pork fat temperate zone to the olive oil and vegetable tropic zone. He writes from an experience of several years in the tropics, and adds that he never saw a single case of sunstroke or impending symtoms, and that he felt better subjectively when actively employed than when lounging, no matter how high the temperature.

The Value of Green Vegetables and Levorotatory Sugars in the diet of diabetics is announced by Professor De Renzi, based on an "infinity of Researches and Observations" (Gazz. Degli Osp. E. Delle Clin., June 5, 1898). He confirms Kuelz's statement that diabetics assimilate levulose easily and that the levorotatory sugars in general are much more easily burned in the organism than the dextrorotatories, and advocates green vegetables for food, as they contain a kind of starch which is transformed, not into dextrose, but into levorotatory sugar in the organism, and neutralizes the effects of meat and fat ingested. The sugar and acetone vanish from the urine, if green vegetables are eaten exclusively for a day or so, and prevent their appearance if combined with a mixed diet. He has even found that a diet of green vegetables will prevent glycosuria in dogs after removal of the pancreas, and cure it if it has already appeared. The vegetables may be boiled or eaten in salads; cabbage, chicory and endives were the most frequently used in his tests, but all are effective; lettuce, asparagus, spinach, cauliflower, etc., although he warns that green peas and beans must be very fresh and the daily amount not exceed one-fourth kilogram. In the severest "carnivorous" cases he restricts the diet to the green vegetables alone for two days, but then, and in "amylivorous" diabetes, allows a mixed regimen, including 100 grams green vegetables, 300 grams meat, five eggs and 500 grams red wine a day. No sweetening substance is permissible except levulose; saccharin, etc., are "foreign substances" and injurious. On account of the levorotatory

sugar in fruit, this is also to be recommended in moderation. He has established the following daily limits for grave cases: Almonds, filberts, oranges, 500 grams net; mandarins, 4 to 8; pears and apples, one-fourth kilogram; plums, strawberries, 500 grams gross; peaches, apricots, 100 grams net; cherries, 200 grams gross. He ranks milk among the last substances to be allowed, although dishes cooked with milk are allowable in the first mixed diet. Diabetic patients, he adds, should take considerable active exercise. After ingesting a certain amount of carbohydrates they should take a walk, not a gentle stroll, but "with energy." Medication is worthless. Electricity exaggerates the decomposition of nuclein and causes sugar to appear in the urine. Mineral waters, massage, gymnastics are more useful, but the vegetable diet is the main thing, and it should be continued indefinitely and at least twice a year the patient should restrict himself almost exclusively to green vegetables for a few days.

SUMMER COMFORT AND HEALTH.

"It would almost seem as though the average man tries to see how much clothing he can wear and not drop dead with sunstroke in hot weather," says Dr Charles E. Page. "He still has on his winter under flannels, not daring to change so early in the season from fear of 'catching cold' in case the wind should shift to the east and make him comfortably cool; his regulation suit on, and on this lovely May morning, with the mercury at 80 in the shade, he takes his overcoat along on his arm, if indeed, he doesn't wear it as the 'easiest way of carrying it.' And all this, when he would be delightfully comfortable naked in the shade, or under an umbrella in the sun. Kicking at the heat in two or three suits of clothes, when even one is, so far as comfort and health are concerned, superfluous, seems to me little short of silliness. The fact that the skin is a breathing organ, that the millions of little capillary blood vessels exhale carbonic acid and absorb oxygen, just as do the blood vessels of the 'inner lungs,' and that this vitally important work of purification is hindered by clothing, every extra layer of which adds to the mischief, is not at all realized by the masses, and is fully comprehended by very few individuals. The naked races never have colds, catarrh, bronchial, or any sort of pulmonary disorders, until they become so hedged in by civilization that they are compelled to change their mode of 'dress'; then, as we know, they die off like sheep with the foot-rot, and always with the diseases above named. The gospel of health, for warm weather, is keep cool; to feel even cold at times means to counteract the mischief of yesterday's and tomorrow's heat. Summer disorders arise from the accumulation of heat, not from catching cold."

CHRONIC NASAL CATARRH.*

Ordinary chronic rhinitis, the common chronic, hypertrophic catarrh of the nasal mucous membrane, can be successfully treated by every practitioner without specialist knowledge. The author considers its etiology, pathology, symptoms and sequellæ, more especially as regards the eye and the ear; and also its diagnosis, prognosis and treatment. This latter in the past has been either chiefly medical or chiefly surgical, in accordance with whether secretion from or swelling of the mucous membrane was the most prominent factor in the semiology.

We have happily long passed the time of the "furor galvano-causticus"; experience having taught us that cauterization of the nasal mucosa is not the cure-all for catarrhs which it was long regarded to be. The author only destroys tissues that cannot be reduced by massage of the mucosa, especially spines and projections, by burning. He has always succeeded in reducing diffuse swellings of the membrane by means of massage with the hard rubber catheter recommended by Pollitzer for the drum of the ear. Massage causes a primary swelling, followed in a few minutes by reduction in size; after the fifth sitting this reduction persists until the following day. Twenty sittings are required on an average.

The procedure is safe and pleasant, at the very least, in comparison with the use of the cautery.

In cases where the exceptionally abundant secretion is especially annoying to the patient the author insufflates very finely powdered xeroform into the nasal cavities, thus effecting a more rapid dessication and reduction in size of the affected membrane. In children whose chronic catarrh is consequent upon adenoid vegetations, after radical removal of the growths under chloroform narcosis (compare *Die Aerztliche Praxis*, year X., No. 6 March 15, 1897), xeroform insufflations are the sole procedures required in a very large number of cases. Only in older children who have had chronic rhinitis for a number of years, a short course of massage treatment is needed in addition to the adenoid operation.

* Dr. Hagedorn, specialist in Rhinology, Hamburg. (From *Die Aerztliche Praxis*, Wurzburg, 1899, No. 7).

Lard an Antidote for Strychnine.—In the *Virginia Med. Semi-Monthly*, Dr. W. D. Turner gives the results of an extended series of experiments made upon dogs, hens, a crow, four young pigs, and two calves, with toxic doses of strychnia sulphate followed by lard in quantities varying according to the size of the animal. All the cases fully recovered, except two of the pigs, who apparently did not get enough lard. It seems to the writer that in this substance "we have a safe, sure and simple antidote for strychnia."

Oculo-Motor Paralysis from Typhoid Fever, with a Case.—Dr. de Schweinitz reports a case of complete right oculo-motor paralysis without involvement of the ciliary muscle, occurring in a man aged twenty-two, during the relapsing period of a severe case of typhoid fever. Four months after the attack the ptosis had disappeared, but there was limitation of the upward, downward and inward rotations, the inward movement being most limited. Dr. de Schweinitz briefly reviews the literature of extra-ocular muscle palsies occurring as a complication of typhoid fever, and thinks his case may be explained by a meningitis, or perhaps by an effect of the disease directly upon the oculo-motor nerve, producing a neuritis, precisely as it produces neuritis of other nerves in the body, notably those supplying the extremities.

A Contribution to the Crede Silver Method of Wound Treatment. By Dr. Paul Meyer, Staff Physician, Marine Service.—Practical experimentation with the Crede Silver method has been made for about a year past at the Naval Hospital at Wilhelmshaven. I have employed the Citrate of Silver Crede as a dusting powder; the Argentum Solubile Crede in 0.5 : 200.0 solutions (7½ grains to 6½ ounces) with 2.0 (30 grains) of albumin for internal use; the Lactate of Silver Crede in solutions of 1 : 2000 for irrigations; the Unguentum Crede; citrate of silver suppositories, 2 per cent., and silver silk, silver catgut and silver gauze.

The conclusions to be drawn from my cases may be stated as follows:

The course of wounds under the silver treatment is in general similar to that under the usual aseptic and antiseptic procedures. But it possesses two important advantages. *Rapid and reliable healing can be obtained without asepticism and with less rigorous antiseptic measures, and thus with simpler means and less trouble.* Hence it is especially suitable for the sick bays of ships, for use in the field, and for hospitals where the facilities for aseptic wound treatment are deficient, and suppurative affections and fresh wounds have to be handled in the same room or very hurriedly, or with inexperienced assistants. As far as my material permits me to judge, I have found Crede's statements to be correct; I consider his method an efficacious and handy one.—*Abstracted from the "Deutsche Militararztliche Zeitschrift," 28th year, No. 1, Berlin, January, 1899.*

OBITUARY

Dr. R. Ludlam, editor of *The Clinique*, and author of a treatise on 'Diseases of Women," died suddenly in Chicago on April 29, while performing "a difficult operation."

Dr. Ludlam had undergone an operation for hernia recently, and was supposed to have entirely recovered from its effects when he suddenly collapsed.

He was a genial, good-natured fellow, a hard worker, and occupied a prominent position in the profession.

MISCELLANY.

—Acetate of thallium, it has been found, may cause a rapid and complete falling out of the hair.

—The women physicians of Russia, have secured a decree placing them on an equality both socially and politically with the male physicians in the empire.

—Dr. John Guiteras, who has resigned his position as professor of pathology at the University of Pennsylvania, intends to settle in Havana and make a study of tropical diseases.

—The sanitary inspector of Santiago reports thirty-nine deaths for the week ending March 10; fifteen less than the week before, not one of which was from contageous or infectious diseases.

—The addition of a few drops of peroxide of hydrogen to urine containing pus, will cause bubbles to rise and froth to appear on the surface, similar to its action on pus in other localities. This test is characteristic and reliable.

—Professor Roswell Park makes the startling prophecy that if for the next ten years the present relative death rates are maintained, in 1909 there will be more deaths in the State of New York from cancer than from consumption, smallpox and typhoid fever combined.

—A boarding house has just been opened at St. Petersburg for the exclusive benefit of country physicians who wish to spend a few weeks there attending some post-graduate course, at the minimum of expense. It is practically a club house in most of its arrangements.

—Surgeons are availing themselves of the electric batteries of the automobile, in taking the X-ray picture in the patient's room in his own house. As the automobile stands at the door its storage battery wires are led to the sick room and the skiagraph is taken without moving the patient.

—Fermentation. Experiments recently made by Prof. Buchner show that fermentation depends not on the yeast growth itself, but on its chemical products, in the same way, probably, that germ diseases are caused, not by the direct growth of the germs, but by the poisons they generate in the body.

—It may be consolation to those threatened with blindness to learn from George Harley, F.R.S., the distinguished London physician, who suffered from loss of sight for a considerable period, that "the blind man lives in an ideal world of his own infinitely more beautiful than the world which surrounds him."

—The medical profession has, alone among the learned professions, always adopted the plan of charging according to the means of the client, and this custom has long been an accepted fact, so much so as to be understood to form the basis of the contract, even when the charges have to be recovered by legal process.—*Medical Times and Hospital Gazette.*

—The Senate of North Dakota has passed a law providing for the appointment of a board of physicians to decide upon the fitness of applicants for marriage licenses to enter into marriage relations. Licenses will be refused to any who suffer from diseases that are likely to manifest themselves in their progeny, especially dipsomania, insanity, syphilis and tuberculosis.

—Dr. Thomas Oliver, of England, who has been investigating the cause of the "compressed-air disease," which so frequently affects workers in caissons, has come to the conclusion that it is due to the increased solution in the blood of the gases met with in compressed air, and the liberation of these gases after the person escapes from the compressed atmosphere.

—San Francisco physicians have started a "black list" against millionaires. The proposed safeguard is the result of a prolonged law suit between Dr. C. F. Buckley and Millionaire James V. Coleman over a bill which the latter refused to pay on the ground that it was too large. The court rendered a verdict of $4,000 for the doctor, which was a little less than half the amount he had first asked for his attendance on the millionaire.

—Nelson, the great English admiral, about the meridian of life, was subject to frequent fits of the gout, which disease, however, his biographer states, he totally overcame by abstaining for the space of nearly two years from animal food and wine, and all other fermented drink; confining his diet to vegetables, and commonly milk and water. Early in life, when he first went to sea, he left off the use of salt, believing it to be the sole cause of scurvy.

—At Arras, in France, a young man accidentally swallowed a five-franc piece. It lodged in his stomach, and all attempts to get rid of it being unavailing, the following operation was performed. A large incision was made in the abdomen, through which the stomach was carefully drawn by means of a wire. A small slit was then made, just sufficient to allow the coin to pass, and it was extracted without difficulty. The stomach was then sewn up and replaced, and the abdomen closed. The operation was completely successful, and the patient is now rapidly recovering.

—A curious example, in a young female, of reading through opaque bodies, has just been reported by Grasset, of Montpelier. Dr. Ferraul, of Melbourne, had told Grasset of this girl. Grasset, to test her, wrote some French, with a few Greek and other words, on a card, wrapt it in tinfoil, inclosed this in an envelope, which he sealed with wax. Ferraul went to the girl's house to bring her, but she at once said: "I can read it now" (300 yards away), and immediately dictated to Ferraul the writing on the card. Grasset was informed of the test and reported it to the local society. Who can explain it?

—It is publicly stated that there has been an important secession from the ranks of the vegetarians, the entire Dominican Order in England having received permission from Rome to eat flesh four days a week, instead of perpetually abstaining, as heretofore. In cases of ill health or specially hard work, meat is to be allowed six days a week. This decision has been arrived at after the closest medical and official investigation of the effects of perpetual abstinence from meat in a variable climate like that of England, the result being that vegetarianism has been declared incompatible with physical strength and hard work.

—Dr. Clemen Dukes, physician to the renowned Rugby School, in England, has just read a valuable paper before the Headquarters' Association upon the unnecessary damage suffered by children in the process of education. From an experience of twenty-eight years he is convinced that the younger school children are seriously and even permanently injured by the deadening routine, confinement, and lack of rational planning and adaptation of the course of study. He urged that the State should insist that every school should have ample grounds for games. He also significantly intimated that school hours are almost in as much need of regulation as work hours before the passage of the factory acts.

—A unique curio of medical literature is the little *London Phonographic Record of Clinical Teaching and Medical Science*, edited by the Society of Medical Stenographers, of which Sir William Gowers is the leading light. Into a small, thin pamphlet of fifteen pages, about six inches by four, are compressed four to six original articles and case reports, several editorials, and a column or two of news items. It is printed in pure Pitman shorthand, and for compactness the contrast between it and the average medical journal is like that between a pound of sugar and a gram of saccharin. Its neatness, lightness, and economy of print and space, says the *Lancet* make us long for the day when nothing but shorthand as a means of literary expression, will be taught in our schools, and all our literature can be reduced to this compact and beautiful form.

—A somewhat distracted mother, who was also a little deaf, brought her daughter the other day to see a Birmingham physician. The girl was suffering from what is known among many people as "general lowness." There was nothing much the matter with her, but she was pale and listless, and did not care about eating or doing anything. The doctor, after due consultation, prescribed for her a glass of claret three times a day with her meals. In ten days' time they were back again, and the girl looked quite a different creature. She was rosy cheeked, smiling and the picture of health. The doctor congratulated himself upon the keen insight he had displayed in the diagnosis of the case. "Yes," exclaimed the excited and grateful mother, "Thanks to you, doctor. She has had just what you ordered. She has eaten carrots three times a day since we were here, and sometimes oftener—and once or twice uncooked—and now look at her!"

ORIGINAL ARTICLES.

YELLOW FEVER: ITS TREATMENT.

By Augustus Le Plongeon, M. D.

ETIOLOGY.

THOSE who have studied the subject of yellow fever agree that it is a poisoning of the body by a germ of unknown nature.

By its action on the liver it produces a supersecretion of the bile, which somehow gains access to the blood and poisons it, causing congestion and abundant hemorrhage.

The shores of the Mexican Gulf are its prolific nursery. After this admission physicians cease to concur; some are of opinion that the germ is vegetable, a species of fungi; others are equally certain it is animal, a microbe of some kind; none, however, have been able to prove to which kingdom it really belongs.

Some assert that the disease is contagious, while many contend it is only infectious; each treats his patients according to his pet theory, and as a general thing loses the majority of them.

The masses, none the wiser for the disagreement of those who are supposed to know best, have conceived an undue dread of the disease; this fear, acting upon their imagination, predisposes many to its invasion, aggravates the symptoms and augments the number of victims through their persuasion that the malady is, in most cases, mortal.

Such is not the case, however, except in epidemics of the most virulent type, when the activity of the poison does not allow time for the medicine to act; but this seldom happens.

Although the nature of the germ is still a mystery, it is well known that it can be transported in clothing, merchandise, ships or railway cars to long distances; develops in countries far away from its natural habitat, and becomes acclimated where climateric and local conditions are favorable. Its development seems to necessitate humidity and heat; this is why it best flourishes in the proximity of the seaboard, of marshes, or on the banks of large rivers; it seldom extends far inland.

Formerly yellow fever, confined to the Gulf of Mexico, the Antilles, the coast of Venezuela, and the Guyanas, was unheard of in Southern America, south of the Equator.

In the latter half of this century, for some unknown reason it has overleaped this boundary, invading Guayaquil and Peru on the west, the shores of Brazil on the east of the continent; it has established itself in the latter place permanently and become endemic.

The damp and warm seasons of the year are most propitious to its development, on account of the great fermentation of animal and vegetable matters then going on, while the dry and cold months, when this fermentation is very slight, are unfavorable to it; this shows that the disease, like the remittent bilious fever of the tropical countries, and the *Ictere grave* of France, which it closely resembles, is infectious, at least in the beginning.

These are facts generally acknowledged by all authorities who have resided and studied yellow fever in the localities where it is endemic.

These germs may remain inactive for years; that is, as long as the atmospheric and local conditions are unfavorable to their active existence; this accounts for the periods when the disease abates and even disappears. But as soon as the conditions become propitious they wake up, so to speak, like the vibrios, the bacteria, and some zoöphites, which may for a long time look as if dried and dead, and return to active, living existence when placed in contact with moisture and warmth.

If these germs are not destroyed on their first appearance they in all probability will rapidly increase and be the origin of an epidemic. The same thing happens when they are imported into a place where the climateric and other conditions favor their reproduction.

It is then the duty of health officers and other authorities to see that the effects of the first patient be burned and his body cremated, if he succumbs, for it will unavoidably become a focus from which the infection is as certain to spread as the sun to rise in the morning.

With the fermentation consequent upon the decomposition of the dead body the germs quickly multiply, and are carried by the gases to the surface of the earth; these rise with the vapors, are wafted through the air, breathed into the lungs, where they come in contact with the blood and enter the circulation. It is therefore after sunset, after the dew begins to fall, during the night and early in the morning, before the rays of the sun have dissipated the mists, causing them to ascend to the upper regions of the atmosphere, that the disease is contracted. During the day, when the air is heated, clear and free from moisture, there is little or no danger.

INVASION.

No sooner have the germs entered the circulation than they are carried to the liver, thence to the stomach, where they multiply very fast, invading the intestines.

The patient then feels a slight rigor in the back, along the spine, as at the beginning of the cold stage in intermittent fever. The pupils expand and become brilliant as when belladonna is applied to them, the eyes acquire a peculiar stare, the ball becomes painfully sensitive to the touch, then the gastro-intestinal troubles are not long in manifesting themselves.

The tongue becomes dry and white, the base covered with a thick yellowish coating; the palate is yellow; the anorexy, loss of appetite, is complete; severe pains are felt in the back of the head, extending along the spine to the lumbar regions, thence to the limbs. As time passes these become more and more intense, until almost intolerable; the patient is restless. Unless his reason has sufficient control over his physical sensations he endangers his life by uncovering himself, throwing aside the bed clothes, whose weight he finds distressing.

There are patients who, in their endeavor to seek relief, jump out of bed, thus allowing the cool air to strike their skin. The stomach is tense and painful to the touch—the constipation, most intense from the moment of the invasion, after the second day is followed by frequent stools, bilious at first, then of

black matter, similar to that vomited. The fever is high, the pulse reaching sometimes to 107 pulsations. The thirst is intolerable, the face red and swollen—the skin covered with petecchiœ, confluent, and of a brick red color—the conjunctivæ, of a yellowish red hue, impart to the eyes a peculiarly wild look. Notwithstanding the prostration and adynamy, the sensibility and intelligence remain unimpaired. The patient knows the gravity of his complaint, and discusses it with great lucidity. Sometimes on the third, but generally on the fourth day, hiccough presents itself, followed by nausea, and the vomiting of a mucous, glutinous, blackish matter resembling dregs of coffee, composed exclusively of blood, brown, sticky, but not coagulated. The quantity ejected varies from a few spoonfuls to eight pints or more. Death in this case results from loss of blood; microscopic examination of the liquid vomited reveals nothing. It is composed of the same elements as the blood, mixed with some bilious matter—no germs, origin of the disease, are found in it. The icteritious coloration of the skin, from which the disease has received its name, sometimes makes its appearance on the fourth day, but often not until after death.

It sometimes happens that upon the third day all symptoms suddenly disappear, the pulse and temperature are normal, all pain has vanished, the patient is hungry, asks for food, says he never felt better in his life. Inexperienced nurses and physicians think they have conquered the enemy; that all danger is passed.. Not so, however.

If the patient is then allowed to get up, or take food, he will never recover. He will die within twenty-four hours.

Deaths that take place on the third, or between the third and fourth days, and are attributed to increased virulence of the scourge, may be traced to these causes, if inquired into, unless complications induced by some other disease, particularly alterations produced by previous paludal fevers, aggravate the accidents of yellow fever.

Towards the end of the third day the second phase of the disease manifests itself. This we may designate as typhoid symptoms, from which yellow fever has been called by some authors *typhus of the tropics*, or *American typhus*. The gastric symptoms return, much increased, showing that the germs affect more particularly the gastric intestinal mucous membrane. The tongue is black in the middle, and edged with a deep yellow line. The papillæ stand erect; to the touch it is hard, dry and rough, like that of a cat. The thirst is intense; soon hiccough and nausea appear, then the vomiting through the mouth and nostrils of a black fœtid matter.

If not promptly stopped this vomiting goes on increasing and becomes incoercible, the patient ejecting the matter without effort or pain at the slightest movement.

The gravity of the disease is in proportion to the frequency and multiplicity of the hemorrhages, which are a constant concomitant and characteristic symptom of yellow fever.

These hemorrhages take place through the stomach, the intestines, the bladder, the lungs, the nose, even the eyes and the ears, and in females the womb, particularly if the epoch of their menstruation is near.

Not infrequently nervous symptoms present themselves from the fourth to the fifth day.

The patient is restless, his strength seems suddenly to return; he wants to tear the bed clothes, to get up and walk about; he is delirious. I have known of cases where during the momentary absence of their nurse sufferers have advanced the hour of their impending doom by committing suicide.

Delirium is generally the forerunner of death, which occurs between the sixth and seventh day.

Toward the end of the fourth, or at the beginning of the fifth day, the trouble in the kidneys becomes evident. Their sluggish action is often accompanied with hemæturia, the scanty urines are mixed with bilious matter, blood and albumen that comes from the serum of the blood passing through the kidneys, and has become separated from the coagulum. This is a most fatal symptom.

Between the fifth and sixth days, although the patient retains all his intellectual faculties, he begins to sink. If a reaction be not induced at the proper moment, or the remedies fail to act and stem the course of the disease, he soon falls into a state of stupor and coma, then dies without struggles, without pain, often with a smile on his lips, as if contemplating some beautiful vision.

In several cases when I have actually recalled to life dying patients, on regaining consciousness their first word has been one of rebuke for disturbing them in their enjoyment of a very pleasant dream.

Insomnia is the most terrible of the symptoms; sleep flees from the patient from the time of the invasion, until the crisis in the disease takes place, when he is granted a new lease of life, or falls into the eternal sleep.

ANATOMICAL LESIONS.

Autopsy reveals a discoloration of the liver, which assumes a deep yellowish hue, its volume and consistency in most cases remain unimpaired; but its cells are filled with fatty granulations.

When it is enlarged this is due to former paludal congestion. The blood invariably becomes more or less decomposed and diffluent.

There is a perceptible lessening of the fibrin, a considerable quantity of bilious matters in the serum, but the most critical microscopic examinations have failed to discover in it any germ, although lately several physicians claim to have found this.

It is well known that the elements of the bile react on the globules and serum of the blood, whose plasticity is diminished, thus causing its diffluence, and consequently the hemorrhages in the various tissues, in the nose, the gums, the tongue, the conjunctivæ, the stomach, the intestines, as already said.

If in the course of the malady vomiting of decomposed blood has not taken place, after death that black matter, having transuded through the mucous membrane, is found in large quantities in the stomach.

The bile having entered into the circulation of the blood, is carried to all parts of the body, and soon manifests itself by imparting to them a yellow tinge. The hepatic parenchyma only allows a small quantity of blood to transude; but this liquid is found in large quantities in the abdominal portal, the suprahepatic and mesenteric veins.

The spleen is hypertrophied, soft, and at times

diffluent, particularly in those who have previously suffered from dysentery or paludal fevers.

The kidneys are likewise swollen; their texture, however, not being altered; their coloration is due to the general ictericia.

TREATMENT.

I will premise by stating that during the great epidemic of 1868 and 1869 in Lima, Peru, when hospitals and lazerettos were crowded with patients, and the mortality in the city was appalling, I studied the disease on hundreds of its victims of both sexes, of all ages, all complexions, nationalities, in all ranks of society.

After adopting the treatment I am about to describe I lost very few patients. Toward the end of the epidemic in 1868 I contracted the infection a certain afternoon while visiting a patient. When I entered her room, which was tightly closed, and breathed the vitiated atmosphere, literally thick with germs, I felt, as the saying is, that I was "in for it." From that moment I resolved to follow the course of the disease, and study its progress and development in my own body—where better to become thoroughly acquainted with it? Had we not to be intimate with each other for at least a week?

I decided to make the best of it. What I write here is therefore not from hearsay, but personal and practical experience.

I had long ceased to regard yellow fever as a specially unmanageable or very dangerous disease.

Again in August, 1873, in company with Mrs. Le Plongeon, I went to Yucatan, to explore and study the ruined monuments of the ancient inhabitants. We were met on board the steamer by Mr. Martin Hatch, of New York, then American consul at Merida. He informed us that a severe epidemic of yellow fever was raging in the country, and advised us not to land, as every unacclimated foreigner who had taken the infection had succumbed. His own father had fallen a victim to it, and been buried only a week or two before our arrival.

For myself personally I did not care; I was comparatively safe, since I had had the fever, which seldom attacks the same person twice, although in my practice I have had patients who have taken it a second time. But I feared for Mrs. Le Plongeon: she was very young, full of health and strength, had always lived in northern climates, and was visiting the hot shores of the Mexican Gulf for the first time.

It is well to remark that young persons, those of sanguine and full habit, are more exposed to the invasion of yellow fever, and more difficult to cure, than individuals of delicate constitution and lymphatic temperament. This is why children and women in general, like people who have reached the decline of life, are less liable to contract the disease, and more easily cured.

Notwithstanding Mr. Hatch's advice and my own entreaties to avoid the danger by remaining away from the country, Mrs. Le Plongeon persisted in going ashore. She had not come so far to be deterred by yellow fever or fear of death from her purpose of exploring the remains of an ancient, unknown civilization, and be deprived of the honor of being the first woman to make archæological researches in the peninsula. She would not take it, but in case it took her she was satisfied I could save her.

So we landed at Progreso, and soon were on our way to Merida, the capital. Three days later Mrs. Le Plongeon felt the premonitory chills running down her back; she then knew that Yellow Jack had found her, and was greeting her on her arrival in the Land of the Mayas.

The miserable inn, the only and best in the city where travelers could be entertained, of all places was the last where a patient suffering with a dangerous illness could be properly attended. Not only was the camp bedstead without a mattress, but also innocent of bedclothes. Mattresses are things wellnigh unknown in that country, and used by very few; happily, we had our own sheets and blankets.

The people who heard of Mrs. Le Plongeon being stricken with the scourge prophesied she would soon be dead and buried, like all the other foreigners who that year had visited the city.

I nursed her during her illness, adhering to the same rules I had so successfully followed in Peru. To the great astonishment of all she recovered, and on the seventh day was out of danger..

The treatment of yellow fever, like that of all infectious diseases, must be divided into prophylactic and curative.

PROPHYLACTIC TREATMENT.

All epidemics begin invariably with one, or at most, a few cases. In a locality where yellow fever is endemic, when, after a lapse of time, during which the disease has been in abeyance, many persons are taken ill at the same time, and in various places, it is a proof that the atmospherical conditions have become favorable to the development of germs that had lain dormant for want of means necessary to their active existence.

We know that moisture and warmth are preeminent among these, whatever be the others.

People must therefore avoid exposing themselves to damp night air, and keep their dwellings well ventilated, open during the day, so as to admit the hot, dry atmosphere, when the sun is high above the horizon; closing them before it sets and the vapors descend from the upper regions and condense into dew.

In districts where the infection is not endemic, but accidental, when a case occurs it shows that the germs have been imported.

They will develop if the conditions necessary to their propagation are propitious.

It is the obligatory duty of the health authorities to destroy said germs from the beginning by burning all the effects of the first patient; his body, if he dies, all bedding, carpets and other furniture of the apartment where he has been confined.

By following the same rule with those successively affected by the disease its spread will as certainly be prevented as a conflagration may be averted by quenching the first spark with a bucket of water.

If the prejudice against the cremation of dead human bodies is such that the living foolishly prefer to expose themselves and those they love to the infection, rather than commit the remains of those who are no more and can no longer do good, but be productive of much harm, to the purifying action of the flames, the next best thing in order to protect

them and their neighbors from the consequence of their shortsightedness and bias is to keep large fires burning constantly, during several days, on the graves, and to lay the corpses in fresh burned lime, whose corroding properties will soon sear the flesh and destroy the germs.

Cleanliness, at all times so necessary to health, must be particularly looked after in epidemics of cholera and yellow fever.

It is the obligation of everyone to see that no garbage or rubbish of any sort accumulates in heaps, especially in damp places, or in localities where the direct rays of the sun do not reach, and to burn such rubbish day by day as soon as sufficiently dry. If allowed to remain moist it ferments, retains the germs, develops them and becomes a new focus of infection.

Inasmuch as many individuals do not possess even the natural instincts of self-preservation, and do things that endanger not only their own lives, but the lives of the whole community, it is the imperious duty of the health commissioners and police to see that these simple laws of hygiene be complied with.

It is a well-known fact that through the defecations of patients infectious diseases are communicated. It is therefore necessary in order to prevent as much as possible the propagation of the germs from that cause to disinfect such defecations before throwing them away, taking care in disposing of them to do so in places where the rays of the sun reach them directly.

The best, cheapest and handiest disinfectants for the purpose are sulphate of iron and carbolic acid.

As to personal precautions, everyone should avoid going out after sunset, or before sunrise, since it is particularly during night that the disease is contracted.

Care should be taken not to go near a patient, or an infected locality, with an empty stomach, or to eat anything that may induce the slightest irritation of the digestive organs, never losing sight of the fact that in yellow fever these are the principal seats of the disease.

The bowels should be kept perfectly free.

CURATIVE TREATMENT.

If the premonitory symptoms be properly and promptly heeded, and from the first suitable remedies are administered, the force of the disease may be checked and the consequences are seldom fatal, unless some unforeseen complications supervene.

Unhappily, the physician is generally called when the disease has already taken a firm hold of the patient; that is, on the second, even third day, after the inhalation of the germs.

The ablest authorities admit that the treatment of yellow fever is, at best, but very imperfectly understood, and quite uncertain.

When phlebotomy was the general practice in the cure of diseases, and more in use than it is now, copious bleeding was recommended by learned practitioners. They argued that inasmuch as yellow fever caused death by decomposition of the blood, the less material it had to work upon the easier to conquer. They lost sight of the fact that the germs act on the gastro-intestinal organs exclusively, not directly on the blood, in which, I repeat, the microscope has failed to detect them, and that its decomposition is the result of the introduction of bilious matter among its elements.

Hemorrhages, more or less abundant, being the constant symptom of yellow fever, bleeding should particularly be avoided, since it augments the adynamy, and helps in causing a rapid fatal termination, the gravity of the complaint being, as we have seen, in direct proportion to the loss of blood.

Others again having noticed, or believing they had noticed, intermittence in the march of the disease, being convinced that yellow fever is a species of pernicious remittent ictericious fever, have administered sulphate of quinine, wine, and extract and maceration of quinia, but without satisfactory results.

In the countries where it is prevalent empirics administer to their patients a dose of castor oil, with lemon juice, or a decoction of orange leaves, followed by dry frictions or frictions with lemon juice.

This mode of treatment is known as *"remedio de la negrita"*—"remedy of the negress." Under it some of the patients recover, many more succumb.

In all these treatments the great aphorism, *sublata causa, tollitur effectus*—"if you want to prevent the effects remove the cause," seems to have been altogether overlooked or forgotten.

As the disease is produced by an infectious germ of some kind our first duty is to expel it from the system by all means in our power.

Knowing that its action is particularly exerted on the gastro-intestinal organs, our strongest efforts should be to free these from the poison, taking care not to irritate the stomach and intestines, without neglecting to combat, as soon as they present themselves, any of the particular symptoms and accidents as they develop in the course of the disease.

The treatment most to be relied upon, that which in my hands, and the hands of others, in private practice, as well as in hospitals, has proved most effective and constant in its action, and by which thousands of patients have been cured, is the following:

As soon as the premonitory symptoms of the invasion are felt, before even the pains in the head and back make their appearance, if possible the patient should take two ounces of sulphate of magnesia (Epsom salts) in a tumbler of water. If after two hours the salt does not act, two more ounces should be administered—as at the beginning the disease induces constipation, a thing to be avoided at any cost. If after two hours more—that is, four hours after taking the first dose—the medicine does not operate, two more ounces may be administered

To those ignorant of the qualities of Epsom salts this may seem an enormous quantity, and it would be ordinarily. This salt does not irritate; it is well adapted to the treatment of fevers and inflammatory affections, is refrigerant, most useful as a purge on that account in tropical countries, where the blood and the whole system is heated by the climate of the torrid zone.

Besides, we must not forget that the evacuation of the bowels must be provoked as quickly as possible, with the least iritation. It also acts as a diuretic.

To help its action, and promote diaphoresis, hot water, slightly acidulated with sulphuric acid, should be freely taken. This acid, which administered in a dilute state is tonic, antiseptic, and refrigerant, is al-

ways prescribed with advantage in typhoid fever and passive hemorrhage, and should therefore be preferred in yellow fever to lemon juice, that is, citric acid, which diluted with water is simply a cooling, refreshing drink.

The object of this preliminary treatment is to expel the germs from the system, and also to prepare it for the action of the medicine necessary to combat subsequent symptoms.

When the purgative effect of the salt has ceased, diaphoresis should be continued and promoted by the administration of a spoonful of Waiora every six hours in half a tumbler of water, and by hot sulphuric lemonade and warm coverings.

Care must be taken that cold air does not strike the skin of the patient, and to change his linen and bedclothes as soon as wet; in fact, the patient should not lie more than twenty-four hours on the same mattress and bed-clothes, which should be thoroughly sunned every day.

Although the patient is to be carefully protected from the atmosphere, pure air must, notwithstanding, be freely admitted into the sick room.

Wairo is an Indian remedy; its name means "the fount of life." An alcoholic tincture of several tropical plants, an antispasmodic and antiseptic, it has a direct invigorating action on the gastro-intestinal organs, for which reason it has proved to be a *quasi-antidote* to yellow fever. Its astonishing remedial powers have been thoroughly tested in Lima's hospitals. From half an ounce to one ounce having been poured into the mouth of patients given up for dead, many have revived and lived. It has proved, on account of its action on the stomach, invaluable in the cure of most inveterate cases of dyspepsia.

On the third day the headache, pains in the limbs and back have disappeared, the tongue is clean; all traces of the plague seem to have vanished.

As I have already remarked, the patient wants to get up—to eat. If allowed to leave his bed, and if he eats solid food, it is time to make his will, for he will soon die.

His thirst and hunger may be allayed with ice-cold mutton broth, from which all fat has been carefully skimmed. Henceforth we shall have to wrestle with the disease in good earnest. As in the preceding days all drinks have been administered hot, now they must be given icy cold.

Every symptom must be carefully watched, and as soon as it presents itself instantly combatted with appropriate remedies. The safety of the patient will depend in great part on careful nursing.

Before the end of the third day, as already explained, the gastro-intestinal troubles will re-appear, greatly intensified. As soon as the patient complains of nausea ice-cold sulphuric lemonade must be administered, and all means to prevent vomiting used.

A slight dose of Epsom salts will be very useful to free the stomach from decomposed blood which has transuded through its mucous membrane and cause it to be carried through the intestines. It is that decomposed blood which irritates the stomach and produces nausea. The action of the salt will be very prompt.

Carbolic acid may then be administered with advantage, both in drink and enema, not only on account of its antiseptic properties, but because it gives tone to the mucous membrane by slightly cauterizing it, without producing inflammation, thus presenting an obstacle to the transudation of the decomposed blood, and allaying vomiting.

The dose of the acid must not exceed four or five drops to a tumbler, or eight ounces of water, to be given in spoonfuls, as occasion demands. The nurse must not lose sight of the fact that carbolic acid is a very active corrosive poison.

When vomiting has stopped, if the patient is thirsty, a cold decoction of *Guaco Mikania* may be administered without stint, if any can be procured—also cold sulphuric lemonade, and mutton broth to sustain the strength of the patient.

It is generally admitted that wherever a poisonous plant grows, or a venomous serpent or insect inhabits, the antidote to their poison is to be found. That when a disease is endemic in a locality there also its remedy exists, as for example the Peruvian bark is for the paludal intermittent and remittent fevers, so prevalent in the valleys where the cinchona trees flourish.

So the Guaco Mikania grows in Central and South America and the West Indies, where it has been used from time immemorial by the natives as a febrifuge and a counter-poison against the bite of insects or poisonous serpents.

"Waiora" is also administered in doses of one drachm in a spoonful of water every six hours. Every means must be used to stop the hemorrhages when they occur. It often happens that they take the form of epistaxis. It must be combatted by applications of cold lotions on the forehead, or the raising of the arms above the head, which must be kept somewhat elevated; and lastly by *tamponement* and per-chloride of iron.

When in females it presents itself as menorrhagia, the same treatment, bleeding excepted, must be followed as is generally used against idiopathic hemorrhages of the womb.

If nervous symptoms manifest themselves camphor, as an anti-spasmodic, must be administered, with ether and laudanum in sedative doses.

When the kidneys become inactive, and the scanty sanguinolent, albuminous urines are voided with difficulty, a serious complication, which is often fatal, frictions with essence of turpentine on the lumbar regions, repeated several times during the day, and turpentine taken internally, is the best remedy to overcome the trouble.

The removal of the patient from one place to another, at any stage of the disease, must particularly be avoided, as it will surely entail death, unless he be thoroughly protected from all contact with the atmosphere.

I have known patients who, after having successfully passed the crisis, being considered out of danger, and fairly on the road to recovery, provided they observed the necessary precautions, in their impatience to inhale a breath of fresh air, against the advice of their physician have exposed themselves to the contact of the atmosphere at an open window, even in the middle of the day, to have a relapse and die in a few hours.

After patients are pronounced out of danger; that is, when the crisis is passed and they have fallen into that refreshing sleep which follows it, from which they awaken into convalescence, they cannot leave their room and breathe the cool air out of doors for

at least eight days without again endangering their life.

Yellow fever, treated as here explained, becomes tractable and loses the extreme danger that inspires such dread in many.

INOCULATION.

It is often asked will inoculation with attenuated germs insure immunity from the disease, as asserted by Dr. Freire and other physicians of repute?

It being a fact that those who once have had yellow fever with but few exceptions enjoy henceforth immunity from it, would show that inoculation might be a safeguard against it.

But where are the germs with which to inoculate? If you want to kill a flea, you must first catch it.

The nature of the germ is yet unknown, and until this has been positively identified as the certain cause of the infection it is as useless, as it is unscientific, to speculate as to what would or would not be the probable or possible results of its introduction into the human body in an attenuated form, provided such attenuated microscopic entity could be produced.

Until then all opinion on the subject can only be hypothetical, liable therefore to be subverted by another hypothesis devoid of all practical utility.

While searching for the germ and its nature, it is the first duty of physicians to seek the means of most effectually combatting the symptoms and accidents it causes in the organism of animals and men, knowing positively, as we do, that it affects particularly the gastro-intestinal organs.

Dr. Paul Gèbier, of Paris, having been commissioned by the French Government to make a study of yellow fever and its cause, asserts that he discovered in the alimentary canal of patients who had died of the disease in Havana a microbe, similar to that of cholera, which leaves a blackish stain on the glass tube in which it was cultivated. This microbe he takes to be the cause of yellow fever.

Dr. Freire, of Brazil, in the early eighties, and later the Italian bacteriologist, Dr. Guissippe Sanarelli, of Montevideo, affirm having discovered in the body of patients who had died of yellow fever a microbe identical to that mentioned by Dr. Gèbier. Dr. Sanarelli prepared a serum, which he says, in the *Annales de l'Institut Pasteur*, possesses preventive and curative properties; and Dr. Girard, of Panama, tells us that having inoculated himself with said serum, he allowed a mosquito which had just been sucking blood from a patient suffering from yellow fever to sting him, and that he was affected very slightly with the disease. It is however questionable if the insect communicated it to him, as said yellow fever microbe is never found in the blood of those suffering from it.

The discovery of said microbe as a direct cause of the disease may be a very interesting scientific fact, but during the prevalence of yellow fever the percentage of the victims who succumb to it continues to be very great, although the writer, who has studied the disease in many epidemics, and particularly on his own body, having been at the same time patient and physician, has become satisfied that yellow fever is not after all so terrible a disease as is generally believed, and that with proper care and nursing, unless complications occur, many patients who die could easily be saved.

ARTIFICIAL FEEDING OF INFANTS.

By Gove S. Harrington, M. D., New York.

THE subject of artificial feeding of infants has been so frequently and ably written upon that it would seem unnecessary to revert to the subject again; but since it is a problem which constantly presents itself to the general practitioner a review of it may not be out of place.

There are three periods in which artificially fed babies are likely to give trouble: First, when the method is begun; second, at dentition, and third, when the baby is weaned; but I believe that much of the trouble experienced at dentition could be avoided if the proper kind of food be given beforehand.

One of the first things we learn is that every baby is a law unto itself, and the food which agrees with one child of a given age and weight will disagree with a similar child. Indeed, while the milk of the mother agrees perfectly with one babe it will disagree with another equally healthy.

The food should, as a rule, be given at a temperature of 100°, F., yet in cases of persistent vomiting small quantities of the food, cold, given at frequent intervals, will be found of service.

The quantity of food given at a time is a matter of great importance, and in ordering the diet of a baby the size of the stomach should always be the guide as to the amount. According to Girard Smith the child's stomach at from one to five days old will contain 1 ounce of fluid, from one to six weeks 1½ to 2 ounces, at three months 3 to 4 ounces, at six months 6 ounces, at eight to twelve months 8 to 10 ounces.

As a rule there is a tendency to give more food than the stomach will contain, and this overloading finally produces dilatation, which is responsible for many of the digestive troubles of infancy. In fact, post-mortem examinations have disclosed a surprising frequency of this condition. This, of course, could not exist if the proper amount of food were given to the child.

The interval of feeding is another question which is propounded immediately after the foregoing, and for a healthy babe is as follows: Up to six weeks the baby should be fed every two hours, receiving nine to ten feedings in the twenty-four hours; from six weeks to three months every two and a half hours, receiving eight feedings; from three to nine months every three hours, receiving six to seven feedings; from nine to twelve months every three and a half hours, receiving five feedings. If the child is suffering from indigestion and malnutrition both the quantity and interval of feeding should be adapted to the case. I frequently have fed babies seven, eight and ten months old as I would one three to four weeks, with most gratifying results.

We now come to the consideration of what kind of food shall be given. There can be no question that mother's milk is the ideal food for infants, and therefore should be the model followed in attempting to prepare an artificial food. It therefore becomes necessary to study carefully its composition. The quantitative analysis of human milk shows that it invariably contains proteids, fats, carbohydrates,

salts and water. Hence, an infant's food should contain all the constituent elements found in woman's milk.

To appreciate the importance of each of these constituents their rôle in the human economy should be understood. The proteids rank first in importance, and are used in the structure of brain, muscle and gland. The protoplasm, the center and life of every cell, is formed and nourished by them, and they are essential to every vital process. When the food is difficient in this constituent the child becomes flabby and soft of muscle, pallid, feeble and loses the power to resist disease. The proteids in human milk, according to Professor König, are composed of casein and lact-albumen in the proportion of one part casein to two parts lact-albumen. This latter substance is the same physiologically as blood serum and is non-coaguable by the digestive fluids. It, together with the fats, dilutes the casein, and doubtless explains why human milk does not coagulate in large curds as does cow's milk, in which the lact-albumen exists in small percentage.

In the adult the blood serum is the great feeder of all the tissues. It therefore is a most important constituent of the proteids, and should never be overlooked in the diet of infants. I am, however, surprised to find that no author whom I have consulted emphasizes this point. Furthermore, there is no artificial food obtainable in the market that contains this constituent in the proper proportions. I therefore always add to the diet some raw meat juice or meat preparation, usually Bovinine or Vi-Carnis. The choice depends upon which agrees best with the baby; but I would always try the raw meat juice first.

Briefly stated, fat forms a necessary part of every cell, enters largely into the structure of the brain, nerves and marrow of bones. It is second only to the proteids in its importance as a food, and in children whose food contains too little fat the bony structures are imperfect and slow of development. In short, it is one of the chief factors in the production of rickets.

The carbo-hydrates do not seem to be used directly in the tissue building, but are used to produce heat. The mineral salts are used in the formation of bones, etc. Water is essential, since four-fifths of the bodily weight consists of water.

An examination of numerous analyses of woman's milk shows that it varies widely in quantitative composition. The proteids vary from 1 to 5 per cent., the fats from 2 to 6 per cent., the carbo-hydrates from 6 to 8 per cent., and the salts from 1 to 3 per cent. It is evident when nature varies so much that we cannot take the average and expect all babies to thrive. Suppose a tailor adopts this plan and makes all his suits the average size of his patrons. There would be more misfits than fits. The same applies to baby feeding. Hence, an infant's food should be of such a nature that the proportions can be changed to suit each case. These constituent elements should behave the same as woman's milk in the presence of the digestive fluids.

It is a well-known fact that both old and young must receive a certain amount of fresh vegetable food or scurvy develops. Furthermore, that babies nursed at the breast or fed upon fresh cow's milk never have scurvy unless the mother is scorbutic, or they get too little fresh cow's milk. This anti-scorbutic element is present in the food of the mother or cow, and is imparted to the milk along with other properties. Hence an infant's food should contain an anti-scorbutic property to insure healthy nutrition.

To recapitulate, an infant's food should contain all the constituent elements found in woman's milk. These constituents must be capable of being varied in their proportions, and should behave similarly in the presence of the digestive fluids. Lastly, the food must contain an anti-scorbutic property.

It is agreed by almost all authorities that for all practical purposes cow's milk must be the starting point, or in other words must furnish the basis of operations in preparing an infant's food, because it furnishes all the constituent elements found in mother's milk, though in different proportions.

It is well known that cow's milk, no matter how fresh, cannot when undiluted be digested by the infant's stomach. When the cause is sought it is found that the difficulty lies chiefly in the proteids—first, because these exist in greater abundance, and second, when coagulated by the digestive fluids the casein tends to form large, tough curds. due doubtless to a difference in ratio existing between the casein and the lact-albumin when compared with human milk, as was pointed out earlier.

There is one property of casein to which I wish to call attention, and that is its power of occlusion on coagulation. In other words, its power to seize a substance in solution and incorporate it in the coagula. This can easily be demonstrated by using a vegetable coloring matter with the milk and then adding acetic acid and filtering.

In order to use cow's milk there must be an attenuation of the casein. This can be done by simple dilution and the addition of cream and some farinaceous substance. If this farinaceous substance is easily digested, as maltose and dextrine, when the casein coagulates and occludes much of it the coagula are in a measure porous and offer less resistance to the action of the digestive fluids.

I have always used a farinaceous substance in modifying cow's milk, but just how and in what proportions this modification is to be made depends entirely upon the baby, for the food must be made to fit the infant and not the infant the food. The formula needed is determined by experiment, but the following one will be found of service as a starting point, from which we can ascend or descend to suit case: Milk, 6 ozs.; water, 9 ozs.; cereal 6 drachms. This is made alkaline by the addition of either lime water or bicarbonate of soda. Along with this raw meat juice or some other meat preparation is given. The raw meat juice is prepared thus: Equal parts of lean meat finely minced and water. This is thoroughly mixed and allowed to stand in a refrigerator for half an hour; then strain through a thin piece of muslin. This must be prepared at least twice a day, as it deteriorates quickly. From 1 to 3 ounces are given daily if borne by the stomach. In very young infants the milk must be further diluted until it is perfectly digested. This is determined by examining the napkin. The quantity of milk is then gradually increased. At six months the child should be able to take two parts of milk to one of water and cereal. Sometimes cream or top-milk agrees better than

plain milk, but it must be diluted more. When, as is often the case, the baby cannot take cow's milk at all, and must be placed temporarily upon barley water, the milk can be added gradually until a satisfactory diet is obtained. The cereals I have used have been those in which all the starch is converted into maltose and dextrine, barley and rice water. These are not intended to supplant fresh milk as a food, but are employed simply as an adjunct to modify and render more digestible the coagula of the milk. In selecting such a farinaceous substance I try to choose one which is easily digested and assimilated, and thus avoid practically putting a foreign substance into the stomach. Fresh cow's milk must eventually be the chief factor in the diet or the child is likely to develop either scurvy or rickets.

The Walker Gordon Modified Milk is another food which is highly commended by many physicians and is given much space in the latest works on pediatrics. The modification practically consists in reducing the percentage of casein by dilution and the adding of cream, milk-sugar and lime water in sufficient quantities to give the desired percentage in each of the constituent elements. Theoretically, this appears to be a solution of the whole question of infant feeding; but upon using it we find that the proteids must be greatly reduced for several months or the milk disagrees. This is probably due to the fact that in Modified Milk 80 per cent. of the entire proteids consists of casein, while in mother's milk, according to Prof. König, casein represents only 33 per cent. of the entire proteids, the remainder being lact-albumen.

It will be seen that there is not only a great deficiency in the lact albumen but also in the total amount of proteids, which, as has been pointed out, takes first place among the constituents of a diet. I doubt very much whether the proteids can be withheld for several months in an infant's food without harm.

Furthermore, some writers claim that the addition of milk-sugar does not make the carbo-hydrates identical to mother's milk. In fact Dr. Brush, in a paper read before the Nashville meeting of the American Association, claimed that milk-sugar was not identical to the substance found in mother's milk, and in proof of the assertion cited cases where glucose was found in the urine and fæces when milk-sugar was added to the milk.

It is unfortunately true that we are compelled to consider the cost of a food. Among the poor it is often found that the mother is obliged to wean her baby in order to earn a living, and a food must be found that is within her means, which latter condition excludes the use of Modified Milk.

Condensed Milk.—It is impossible to condense milk without an aggregation of the fats which do not evaporate. This interferes with its keeping qualities, and hence the manufacturers remove the major part of the cream and preserve the rest by the addition of cane sugar. When diluted the milk is deficient in fats, and has lost its anti-scorbutic property, by reason of the long continued heat to which it has been subjected. Besides, the cane sugar is very objectionable, because it is not changed into the germicide lactic acid as is milk-sugar and very slowly converted into glucose. It is in the process of change to glucose that cane sugar gives trouble by fermenting and causing wind colic. Furthermore, it does not seem to occupy the same place in the animal economy as does milk-sugar, and should not be used when avoidable. Dr. Louis Starr, of Philadelphia, says: "Infants fed upon condensed milk, though fat, are pale, lethargic and flabby. Although often large, are far from strong; have little power to resist disease; frequently cut their teeth late; and are likely to drift into rickets." These views are also endorsed by Dr. Eustace Smith, of London.

Sterilized Milk.—When possible I prefer raw milk to sterilized, because sterilization seems to impair the value of the nitrogenous elements in some way; possibly by coagulating the albumen in solution. It deteriorates the ferment in milk which renders starch liquid and assimilable, and impairs the anti-scorbutic properties. This is of special importance when there is starch in the diet. Prof. Leeds says: "The deaths due to malnutrition from continuous feeding of sterilized milk have exceeded a hundred fold those caused by disease germs in fresh milk."

Peptonized Milk.—Another form of food is peptonized milk. While it contains all the nutritive qualities of fresh milk, and is of undoubted value at times, it nevertheless usurps the legitimate functions of the stomach, and its continued use impairs the digestive powers by holding them in abeyance and preventing their development.

Dessicated Milk, to Which Has Been Added a Cereal.—These foods require only the addition of water and therefore the relative proportions of the elements cannot be changed to suit the case. These preparations are deficient in fats and lack the fresh food principle. Besides, I do not believe that when casein has been reduced to a powder the addition of water produces the same results as fresh milk. Dried fruits are not the same as fresh ones, and why should not the same thing be true of milk. These foods will agree with some babies for a short time, but the continued use of them is likely to produce either scurvy or rickets.

Farinaceous Preparations Which Contain Free Starch.—Starch as such is not found in milk. Nature has recognized the fact that a babe has little or no diastasic powers. It appears that in new born children the parotid gland alone contains the diastasic ferment, ptyalin. The saliva is not secreted to any extent until the second month, and the diastasic powers of the child are not fully developed for a year. Starch, according to Cheadle, gives rise to acidity and flatulence, and most of it is unassimilable. It therefore is objectionable in the early months of infancy. None of these foods should be used continuously as the sole diet, because they are lacking in both the proteids, fats and anti-scorbutic property. This deficiency will in time cause malnutrition. We may as it sometimes happens be compelled to put the child on a cereal food only, but the aim should be to get back to a modified milk diet as soon as possible. After the child has developed some diastasic powers a small amount of starch may be added to the milk with benefit. All of these preparations will modify and attenuate the casein, and if the child is old enough to handle starch, little trouble should be experienced in fitting the diet to the infant.

Farinaceous Preparations, in Which All the Starch Has Been Converted into Maltose and Dextrine, the Products of Normal Digestion of Starch.—In very young children this is the best preparation with which to modify milk, since it requires little effort on the part of the child to assimilate it. As the infant grows it is well to develop by degrees the diastasic powers by the addition of glucose in the form of orange juice and later on to add a little free starch as the infant develops the power to deal with it.

DISEASED CONDITIONS OF THE HUMAN SYSTEM AND THEIR CONSERVATIVE TREATMENT.

By George H. Guptill, M. D., Raymond, N. H.

I BELIEVE in conservatism in the application of drugs absolutely foreign to the animal economy, for the purpose of overcoming various morbid processes which we term disease. First, we naturally look upon the human system as a single living body, which is correct, but not only is this true, but this single living body is made up of millions of little living bodies, cells, which are almost units in and of themselves. And the life of these little cells we must, first and at all times, consider. Constructive and destructive metabolism is all requisite and must be kept at an equilibrium in the maintenance of the body in a normal, healthy state.

Huxley says that life has but three legs upon which to stand; the "tripod" of life, as he calls them; the heart, the brain, and the lungs. This is very true; we cannot get along well with either of these lacking; still, we must admit that we have seen people hobbling along very well with a poor substitute for a heart, lungs, or even brains. Again, we have seen people die who had, as far as we could judge, as good a "tripod" as that with which the average mortal man is blest. Why is this, gentlemen? It is because the primary cellular change is at fault.

Secretion and excretion are practically suspended. The *chemical* change in the minute capillary arrangement has become abnormal. If we have these changes in a perfect balance, a true natural process of the chemical changes in the primary cells, the life of the individual may be prolonged almost indefinitely with a crippled heart, lungs, or brain.

This chemical process is, I believe, a secret as yet, hidden I am afraid from the human eye forever. I believe that we have practically no power over the life of these little cells, unless it is to destroy.

We have at least no intelligent, rational plan of controlling their existence or non-existence. Theories have been promulgated from time to time, founded on experiments performed, but we are far from the truth of the matter as yet. To give you an idea of the vital change which I have in mind, I will take an example from the vegetable kingdom. Primary cells are still the foundation here as with animal life, and these cells are always true to themselves. We take a tiny bud or shoot from one plant and graft it into another. It remains consistent with itself.

It develops into a limb, and years pass by; the few single cells have become a myriad, yet they have not changed.

The sap flows upward in the tree as of yore, but at a certain point, a hidden threshold, which no human eye can discern, it comes under a new and strange influence; here is carried on a change so subtle, so minute, so mysterious, as to be beyond our ken, and the result of this wonderful cellular activity is that the nutriment of that tree is transformed and produces flowers and fruit in accordance with another and different growth.

"Apple juice is made into pears; locust juice blooms into fragrant acacias, and sweet and sour apples hang from the same limb." This same process occurs in the glandular system of the human body, as in the saliva, semen, etc., in a more complex and varied form, as is necessary as we ascend in the order of life.

In this capillary arrangement we have constructive and destructive metabolism carried on to its fullest extent; here is the furnace of the body; here, gentlemen, is the secret of the life or death of the individual. And I believe that this secret is hidden from the eye of even the most powerful microscope, and because of this mysterious cellular change; because of this hidden, vitalizing force which is the foundation of life, which is the Alpha and Omega of all the various workings of animate beings, I believe in the conservation of the applying of drugs, which, I have before stated, are absolutely foreign to the human system, to overcome the various morbid processes which, from hereditary tendencies, errors in conduct as to the laws of health, or from the ingestion of various micro-organisms or germs, that give rise to a train of symptoms we call a disease. Another important reason is the fact that the true action of drugs, *how* they produce their effect, is still a mystery. We get certain manifestations by the exhibition of drugs, but at what expense of the animal economy is not known.

We are well aware of the fact that in our laboratories, only by the most powerful means at our command are we enabled to separate the element oxygen from its affinity, carbon; and yet in the labortory of the plant, under the influence of the sunbeam, and in that most delicate of all structures, a cell, the chains which unite the two elements are broken as easily and quietly as the "daylight comes when the night is done."

These processes are an illustration of the changes which must necessarily take place in the normal workings of the healthy human body. The vast majority of the remedies we are taught to use to combat disease are, as I have said, absolutely foreign to the human economy, therefore their action must be by catalysis or by stimulating the vital process by influencing the nervous system, or by being broken up, separated into their component parts, or by combinations of the three.

Again, we know that drugs do not produce the same effect in all the cases in which they are used—saying nothing of their effect in rabbits and guinea pigs. They are continually "flying off on a tangent" and giving us unusual and sometimes uncomfortable, especially for the physician, results.

Another fact which goes to prove the blindness and unreliability of the actions of our remedies is the great change in treatment in one decade, or even half a decade, and God only knows what we will be using for medicines ten years from to-day, or how

much better prepared we will be to resist that arch enemy—Death. And the reason is in this mysterious cellular change before mentioned, a change of which we will be forever ignorant.

When the human system, working under the strain of being surcharged with effete material, finds itself in danger of being overcome by such matter, whether due to micro-organisms causing fever or other manifestations, how quickly is the trained eye made aware of the fact. The quickened respiration, the rapid pulse, the fœtid breath, the sour perspiration, or the peculiar pinched, drawn, anxious look which the countenance involuntarily assumes, and thus is the intelligent practitioner put on his guard as to the true condition internally, even before he can fully satisfy himself as to the exact location of the central lesion.

Take, as an example, a case of septicæmia from any cause, how quickly the systematic nervous arrangement sends out the alarm. The heart commences at once to hurry the blood along through its channels in order to facilitate the elimination of waste material. Respiration is hurried for the same reason, other manifestations as before mentioned, and now, gentlemen, if that system has vital power enough to eliminate those toxic materials, so good; if not, what are we going to do to assist nature in her work? Are we going to stimulate with ammonia, alcohol, digitalis, nitro-glycerine? Or are we going to quiet with sedatives and narcotics, and thus give excited nature a rest, as it were, to fortify it for the final struggle.

Gentlemen, I say *neither*. Of what use will it be to stimulate and thus exhaust nervous irritability, or quiet and thus add a double load to the struggling machinery?

Let us add no more toxic material to that already surcharged economy. Rather let us give that patient an excess of pure, cold water, or a normal salt solution to help osmosis and thus assist nature to unload the poison accumulating within.

A simple internal antiseptic, put our trust in God, and wait developments. I also believe in a good saline cathartic in these conditions, notably, Epson salts. I know we feel like fortifying the heart in these cases, but let the organ alone. As to stimulating the heart when its failure to perform its work seems inevitable, I wish to cite one or two cases of tachycardia which have come under my observation. I remember distinctly the first case of this trouble which I was called upon to attend.

The lady had been a patient of mine for several years and had never been troubled with anything like it but once before, at which time she was visiting in Derry. My friend and colleague, Dr. Perkins, was called to attend her in this, as near as I can find out, her first attack. I have no history of the symptoms at this time, but I found her in this, her second spell, presenting the following symptoms: She was sitting in a chair with a slightly startled look on her face, and a little out of breath, as we would term it, and a "shaky" feeling, as she said, here. As I looked at her I could see a slight trembling of the chest walls, or quiver, as it were. I took her wrist, and I could feel *no pulse* whatever. Not a throb of that radial artery, ever so faint, could I find. I applied my ear to the chest and could distinguish no real heart beat, only a confused hum or murmur. Could find no valvular clip with my naked ear. I left ammonia and strychnia because I was expected to do something, enjoined perfect quietude till I returned in half an hour. Called at the shop, told her son-in-law she was going to die—got my stethoscope, and called again. With the stethoscope I could find a slight regularity of the movements of that heart, still no pulse. As near as I could guess the heart was "shaking" about 216 times per minute. I stopped an hour and she was just the same, no worse at all, and I left her until 6 P. M., at which time I could get a little pulse. After seeing her safely in bed I told her friends I thought she would be all right, and left her for the night. I called quite early in the morning and found her apparently as well as ever. Pulse perfectly normal, and I left her, a monument to my skill as a healer of men.

Ten years ago I should have attributed her recovery to skillful treatment. I am not so positive now. The last attack she had, she got well on a teaspoonful of cheap whiskey, taken before I arrived. She may die in the next spell, but she has lived through two or three without the aid of powerful drugs, and I believe not only was a heavy dose of the so-called heart stimulants unnecessary, but they would have jeopardized her chances of recovery. I mention this case, not as an example of skillful treatment, but to show that the heart will take care of itself, under conditions that seem to us to be critical.

My experience has been that the heart is about the last vital organ to stop work. I was taught in controlling the heart with heavy doses of digitalis to be very careful about letting the patient arise quickly from the recumbent posture, for the heart was liable to stop if we did. I have been very careful not to let my patients die of foxglove poisoning. (Case of Bartlett.) I believe we have no right to juggle with the life of our patients by giving poisonous drugs to within this limit. Small doses frequently repeated will do just as well and give the patient a better chance of recovery. I was also taught to give 5 to 10 grains of the carbonate of ammonia in a tablespoonful of the solution of the acetate in a case of pneumonia.

I prepared the prescription once, and took one dose myself. I did not take the second one; it came near killing me, and I have never given it to a patient as yet. If I was ill with pneumonia to-day, and had to choose between drugs and plenty of pure, cold water, in fact, any liquid if it is *surely* pure and wet, I should take the liquid in preference to all the drugs in A. P. Fitch's drug store, but I believe in a judicious mixture of the two. I am a believer in the use of the solution of the acetate of ammonia in this disease, also of the iodide, the last for reasons to be mentioned later.

Another condition, in the treatment of which I ask for conservatism, is the so-called sick headache. I believe that in cases of migraine, the patient is shortening his life at every attack by the use of coal-tar products. It is alarming to think of the enormous sale of these preparations to the public.

Cases of sudden death are becoming more and more frequent, due, I believe, partly to the deleterious effect on the system of those drugs. (Cases cited.)

Let us as physicians educate our patrons to the

evils thereof. The relief is so marked that it is difficult for us to do this, but at the same time we relieve let us caution the people as to the ill effects with which the prolonged use is sometimes followed. I was taught to give quinine in large enough doses to stop the migration of the white blood corpuscles, and thus prevent suppuration and those evils. That is to me a very absurd idea, and I believe strikes a blow to the life of the individual who takes dose.

As to diseased conditions and the cause of malignancy, I am going to give the theory, the facts of which are perhaps as deeply hidden from our view as is that myserious cellular change before mentioned, still it is a theory of the truth of which I am fully convinced. It is this: Scrofula and its grandfather, if you please, syphilis, are the cause, either directly or indirectly, of the vast majority of deaths occurring in early and middle life, whether due, as we believe, to acute or chronic disease.

There are three dispositions transmitted, passed down to us from generations ago; their effects are beyond our control.

The powerful influences of heredity were known ages ago; one of the first illustrations which we have in history is in the strict rules that were laid down, centuries ago, to the Jewish nation, which was to be the ancestors of Christ. It was very necessary that we should have a pure type of physical manhood as well as spiritual. The presence of the Son of Man would not have been as convincing if He had appeared on the scene with coxalgia, strumous ophthalmia, or other diseased manifestation—hence these strict rules.

We have not the ancestors who followed all the laws of health, neither are *we* remembering *our* posterity.

I believe that what we term syphilis, carcinoma, struma, leprosy, also various lesions of the central nervous system, indirectly phthisis, diabetes and chronic nephritis, to say nothing of the diseased conditions of the special senses, fatal cases of acute disease, which were not helped along by so-called heroic treatment, are all due to this worm which is gnawing at the vitals of a suffering humanity. How many times has a case of lobar pneumonia caused the parenchyma of the lung to melt away like a snowflake of a warm spring morning?

Often have we seen in a case of scarlatina diseased eyes, diseased kidneys, or abscesses and ulcers to form in the course of the disease, all due, I believe, to struma, the child or foster-child of syphilis. Syphilis, carcinoma and scrofula have a few characteristics which stamp them relations. One very important one is the seat of manifestation, not of origin but of lesion, viz., the lymphatic system, the juncture of skin and mucosa, also the secreting glands, as testicles and mammary. Not only do we see this parallelism, but we have seen so-called cancers being cured by a quack remedy, which, as we believe, is nothing but a powerful alterative, iodides or vegetable glandular stimulants. I know of three cases of so-called cancer, one case so called by no less an authority than Dr. S. H. Weeks, of Portland, Me., cured by a cancer cure manufactured in Buffalo, N. Y. I lately saw an article in one of the medical journals reporting cases of the same nature. I do not believe that anti-syphilitic treatment will cure all these cases by any means, unless treatment was commenced years ago.

I do not want to give the impression by the foregoing that I am a disciple of Faith Cure or Christian Science, or opposed to the use of drugs in the relief of suffering humanity.

I believe that we have, in a few of the many remedies offered us for the various ills valuable adjuncts to assist nature in her efforts, but I do *not* believe in blindly shoveling into a human economy powerful drugs, simply because we feel that we have a critical case and, apparently, a hopeless one.

I am a believer in the efficiency of iodine, iron, ammonium, sodium, notably the chloride, bromide and phosphate, mercury a little, arsenic a little less, a few vegetable preparations and a liberal use of pure cold water. When I say *pure* cold water I mean *pure*. I was surprised to see an article in the *New Hampshire Sanitary Journal* in regard to this matter, saying that cistern water in a country place was pure enough for use. The color is not objectionable, and coming from the clouds on a clean shingle or slate roof, is practically free from organic matter. Now, to say nothing of dust, etc., I think if the author could see the row of birds roosting on the roof of most farm houses he would change his mind as to this unless the cistern had an extra good filter attached.

PYÆMIA.

By E. Franklin Smith, M. D., New York.

DEFINITION.

PYÆMIA is a general infection of the blood with pyogenic organisms, leading to the formation of multiple abscesses, and accompanied with intermittent fever and other manifestations of septic disease (Lockwood). More briefly, pyæmia may be defined as septisæmia *plus* metastatic abscesses.

Conditions of Occurrence.—It is met with as a complication of any wounds and breaches of surface which are exposed to infection, and of any form of sepsis and suppuration. The terms "idiopathic pyæmia" or "spontaneous pyæmia" do not mean that the disease differs any from the ordinary type, beyond that the seat of inoculation is obscure or overlooked.

The Infecting Micro-Organism.—Ordinary pyogenic microbes may and do cause pyæmia if they enter the blood incorporated in, or attached to, fragments of an infected blood-clot or other solid materials, which, after they have become impacted in blood-vessels as emboli, prepare the soil in distant organs for their localization and reproduction. There can be no doubt that some pus-microbes reach the circulation in nearly every case of suppuration, but their pathogenic action is prevented, or neutralized, by an adequate resistance on the part of the tissues with which they are brought in contact and their rapid elimination through healthy excretory organs.

The Circumstances of the Infection.—Before the pyogenic cocci can cause pyæmia certain conditions have to be fulfilled. When the appropriate bacteria are present much depends upon (1) their *virulence;*

upon (2) the *dose* of them which enter the blood, and upon (3) the *predisposition* of the recipient.

(1) The variations which the *virulence* of different species of bacteria undergoes is now one of the commonplaces of bacteriology, and in many instances is easily controlled. Cultivated outside the body they may become attenuated, whilst passage through an animal restores its potency.

(2) The experiments related by Watson Cheyne show the importance of the *dose* in a definite manner. 1,000,000,000 of Staphylococcus aureus were required to cause the death of an animal, while 250,000,000 only produced a small circumscribed abscess.

(3) *General Predisposition.*—It is a matter of common observation that certain races and individuals are more predisposed to some kind of infection than others. It is more apt to occur after starvation, debility, alcoholism, anæmia, severe hemorrhages, prolonged shock and wasting diseases, such as albuminuria and diabetes.

Local Predisposition.—Wounds in certain positions are more exposed to infection than others, as about the mouth, air passages, alimentary tract, anus, scrotum, axilla, and scalp. After bacteria have been introduced the local predisposing conditions must be such as (*a*) favor their passage into the circulation, and (*b*) favor their multiplication in the wound.

Pathology and Morbid Anatomy.—To be considered are (1) the condition of the wound; (2) the condition of the blood vessels; (3) the infarcts and abscesses; (4) the localizing of the bacteria; (5) the character and situation of the pyæmic abscess; (6) the post-mortem appearances.

(1) *The Condition of the Wounds.*—They usually throb and are painful, hot, swollen, tender, red, with an acute inflammation of the neighboring glands. They often gape and show a dry and glazed surface, covered with ashen lymph; they may secrete a purulent, sanious discharge, and ulceration, sloughing or gangrene may be in progress.

(2) *The Condition of the Vessels.*—Lymph paths are choked with pus corpuscles. The lymphatic glands act as filters and prevent onward progress. The veins are the channels by which the blood is usually invaded. The bacterial inflammation of the walls of the veins, with the consequent formation of thrombi, which, under the influence of cocci they contain break down and suppurate, is a characteristic feature of pyæmia. Portions of the infected or suppurating thrombi are torn off and carried away by the blood current and lodge here and there as emboli, and wherever they find lodgement they produce thrombosis and suppuration (metastatic abscesses).

(3) *The Infarcts and Abscesses.*—Portions of the softened and septic clots are carried as septic emboli to the lungs, and are arrested in the smaller arterioles near the edge of the lung, or at the bifurcation of the arteries, here exciting two kinds of changes in the wedge of lung supplied by that vessel. The first change is a mechanical one, having to do with the interruption of the circulation. The ends in the wedge becomes filled with blood clot, supposed to be due to regurgitation of blood from the veins. The result is an "infarct" and the process "infarction." The second change produced is the result of the action of the bacteria, exciting an acute septic inflammation ending in suppuration, constituting *pyæmic abscess.*

(4) *The Localizing of the Bacteria.*—The tearing of the vessels, the blood clots and the lacerated tisues are all conducive to the arrest of the bacteria.

(5) *The Character and Situation of the Pyæmic Abscesses.*—They are almost always small and multiple. The position of the abscesses depends upon the kind of lesion in which the disease originated. The order of frequency of abscess formation in various parts of the body is about as follows: Lungs, joints, liver, spleen, kidneys.

(6) *The Post-Mortem Appearances.*—The body is emaciated and the skin of a jaundiced hue. Slight rigor mortis; bed sores often are present. The septic foci, such as above described, will be found. The lymphatics are acutely inflamed and the glands are swollen. The blood is thin, dark, and has little tendency to clot. A condition of leucocytosis exists. The heart valves may be ulcerated. Serous cavities contain serous, blood-stained, purulent or fœtid fluid. The viscera are engorged with dark blood.

The Clinical Phenomena of Pyæmia.—The symptoms of pyæmia do not essentially differ from those indicating the other septic infections. The principal difference is in the frequency of chill and range of temperature. The condition is usually ushered in by a rigor, and in its subsequent course chills are of more or less frequency, the temperature rising after each chill to 104° or higher, and rapidly dropping to normal again. The rigor is followed by a profuse sweat. The irregular and rapid alterations in the temperature, with the accompanying rigors, are typical of pyæmia, and help to distinguish it from ague. malaria, acute rheumatism, typhoid fever and septisæmia. The symptoms that accompany pyæmic abscesses vary greatly. A rigor usually marks the occurrence of a fresh infarction or new purulent deposit. In the lung this is accompanied by shortness of breath, formation of a dull area, blood-stained expectoration; in the liver by swelling and jaundice; in the spleen by enlargement; in the kidney by albuminuria and bacteria in the urine; in the eye by pain and blindness and increased tension; in the brain by delirium, coma and cerebral symptoms; in the heart by rapid and irregular action and endocardial murmurs. The skin is pale or jaundiced, the eyes are sunken, the cheeks are hollow, lips and tongue are dry and covered with aphthæ, ulcers, or sordes. Patient is apprehensive. The breath and exhalations smell the same as the cultures of pyogenic cocci. The condition of the wound has been described.

Prognosis.—This is almost absolutely bad, yet there are recorded cases of recovery in spite of internal metastases in the lungs, spleen, etc. Death is seldom delayed beyond a fortnight.

Diagnosis.—The irregular course of the fever, with intercurrent chills, and the occurrence of metastases, are almost pathognomonic in the diagnosis of this condition.

Treatment—Preventative.—The prevention of suppuration in a wound furnishes absolute protection against pyæmia. The prophylactic treatment of pyæmia consists in preventing suppuration in wounds by antiseptic means, and in sterilizing suppurating foci before septic thrombo-phlebitis has

occurred by early incision, antiseptic irrigation, drainage, and in maintaining ascepticity under antiseptic dressings.

Curative Treatment.—Exceedingly unsatisfactory—drugs are of no avail. Sustain the strength. Stimulate. Open up and disinfect foci of suppurations. Antifebrin, antipyrin and other drugs of the same class are worse than useless, as the favorable effects from their antipyretic action are more than overbalanced by the harm they do in depressing the action of the heart. The propriety of an amputation should only be considered in the beginning of the disease, and before extensive dissemination of the purulent infection by embolism has taken place. Secondary disinfection of a suppurating wound with excisoin of thrombo-phlebitic veins, where this is possible, should be practised in all cases of pyæmia for the purpose of limiting or preventing general dissemination by embolism.

DELIRIUM TREMENS IN MODERATE CONSUMERS OF ALCOHOL; WITH REPORT OF FOUR CASES.

By R. Elmergreen, M. D., Milwaukee, Wis.

IN this article I desire to give, first, a clinical report of four cases of delirium tremens, all occurring in moderate consumers of alcoholic beverages (mainly beer); and, second, my generalized observations bearing on the peculiar type of delirium under discussion.

Case 1.—F. J., male, aged thirty-two, blacksmith, married; family history as regards alcohol, negative. Habits fair, retired early, worked ten hours a day and had a good appetite. During the last three months appetite became poor, tongue coated and patient suffered some slight gastric distress in the morning. A few drops of nux vomica before meals, and essence of pepsin after meals, generally relieved him. Patient had been a moderate consumer of beer for fifteen years or more. He drank from two to three quarts daily, supplementing it with an ounce of whiskey morning and afternoons. His general appearance was normal. The face was neither pale nor bloated, and there were no indications of jaundice or incipient alcoholism. Early on July 30 he was kicked by a horse, fracturing the tibia. I reduced the fracture within two hours of the accident, and dressed it temporarily. The fracture was a simple one, with no marked displacement. Twenty-four hours after the accident he became restless; the following night he became slightly delirious. He now began to have hallucinations, picked at the bed-clothes and talked incessantly. His temperature rose to 103½° F., pulse, 110. On inspection I found the ends of the tibia in place and the general appearance of the limb favorable. Forty-eight hours after the accident the typical severe delirium tremens set in. The tremor became more violent, the hallucination more severe and his struggles with imaginary foes pitiable to witness. The thermometer in the axilla, kept there by main force, registered 105° F. Two hours later the temperature went up to 107½° F., and the patient expired in convulsions within half an hour. No post-mortem.

Case 2.—F. W., middle-aged man, coal-driver, married, heavy-set, looking healthy, drank beer in moderately large quantities daily; took whiskey occasionally. Came home feeling very tired on Saturday afternoon, complained of headache and pains in back and limbs. Pulse, 96; temperature, 101° F. Some tenderness over abdomen; could not answer questions intelligently. I diagnosed typhoid fever, and instructed the family accordingly. The next morning his temperature went up to 104½° F., pulse 110. Patient had not slept the whole night, but had picked at his bed-clothes, scolded, and struck at imaginary foes constantly. He answered all questions promptly—like a machine. The family now informed me that his sickness dates from Saturday morning, when he saw his comrade mangled in a machine at the coal works. His tongue was too tremulous to be protruded and a general tremor was developing. There was diarrhœa and vomiting. He refused all nourishment. Within two hours after my morning call I was hastily summoned again. I found the patient up, carefully dressed, and calmly talking about going to work. He had called for whiskey, and not daring to refuse, his wife had allowed him more than I had advised. The patient was filling his pipe with trembling hands, and succeeded in lighting it, but could not keep it in his trembling mouth. He apparently was glad to see me, shook hands and expressed himself as feeling well now, and if I could only take the bugs and the cats with me he would go to work. During this time he sat on a chair and every few seconds struck at his imaginary enemies. I induced him to undress and retire. His temperature now registered 105° F. Six hours later he became violent, with typical horrors, tremors, and his temperature went up to 107° F. After two hours he was seized by violent convulsions, and died with a temperature of 108½° F. No post-mortem. Death proof, chronic alcoholism—delirium tremens.

Case 3.—This case has no further history than that revealed by a lay-woman, supplemented by a hasty and clandestine post-mortem. T. B., aged forty, male, mechanic, unmarried. He drank beer and whiskey daily for ten years, but was never known as a drunkard, the way we generally use the term. Came home complaining of his ankle, which was injured in falling, or rather slipping out of a dog-cart. That same evening he became slightly delirious, talked continually about his work, picked his bed-clothes, had some diarrhœa and vomited freely. He rapidly grew worse before a physician was summoned. Two of his brothers could not keep him in bed. He struggled violently with imaginary foes, calling on his brother to take the cats and snakes away, trembled all over, became maniacal, and expired with convulsions thirty-six hours after he received the injury. Post-mortem: Brain normal, but slightly hyperæmic all over; membranes congested, but neither thickened nor diseased. A hasty look at the heart showed it to be normal, liver cirrhotic, stomach badly congested, kidneys—no record. Cause of death, delirium tremens. I need not apologize for this unique post-mortem, but assure you that, under the circumstances, we were very fortunate in seeing as much as we did

Case 4.—On the 30th of January last I was instructed by a mutual insurance company of Chicago to inquire into the mysterious death of one G. T.

Through the courtesy of Dr. Earles I learned that the patient had died at the Trinity Hospital, and that, to use the doctor's words, "cause of death was not clear." In answer to my letter of inquiry to the attending physician, Dr. Bodenstab, I received the following brief history, accompanied by his courteous regrets at his inability to give further details. G. T., a middle-aged married man, shoemaker by trade, fell while stepping out of a saloon, and sustained a fracture of the wrist (Colles').

The doctor reduced the fracture promptly and dressed it temporarily, leaving instructions with the patient to call at his office the next morning for readjustment, or the plaster dressing.

The next day the patient grew restless and slightly delirious. Upon the doctor's advice he was now removed to the Trinity Hospital. He rapidly grew worse here, became violently delirious, and died less than seventy hours after he received the injury—now mark, with a temperature of 108° F. and severe convulsions. Post-mortem negative save for some slight œdema and hyperæmia of the membranes. Death proof reads œdema and hyperæmia of the brain.

Upon inquiry I find that the deceased was not a drunkard, but drank whiskey and beer in large quantities daily. As in the three preceding cases, he never had an attack of delirium tremens before

The widow's claim for benefit is contested. Of course it will be difficult to convince a jury that this man died with delirium tremens..

These four cases were precipitated by an acci lent or severe nervous shock. The first two cases were treated on the routine plan, with large doses of bromides, supplemented with morphia hypodermically, and chloral per rectum and mouth. The second case received in addition alcohol. The third case received no drugs further than the traditional teas. The fourth case was under the care of an able and conscientious physician, and received, perhaps, the best care of the lot.. They all died, however. They were all daily moderate consumers of diluted alcohol, and died under similar circumstances, ending with an extraordinary high temperature and convulsions. That the delirium tremens in all these cases was typical no one will dispute.

The brief reports of the four cases of delirium tremens just read, all precipitated by either a minor accident or shock, and all occurring in moderate consumers of diluted alcohol, mainly in the form of beer, are either diagnosed wrongly, or stand as a distinct type of delirium tremens practically overlooked by our authoritative text-books on that subject. I have consulted more than thirty writers on alcoholism and its train of symptoms, and have received little or no enlightenment. In my consultations with physicians I am sustained in my diagnoses, and, in fact, by the process of elimination we cannot logically arrive at any other conclusion. Delirium tremens is both a disease and a symptom. It is a symptom incident to alcoholism, as we commonly meet it in every-day practice. As a symptom of chronic alcoholism, or when used synonymously with mania a potu as a symptom of acute alcoholism, pyrexia is generally absent, or, if present, the temperature rarely rises 2 or 3 degrees above the normal. Under judicious treatment the patient generally recovers completely within one or two weeks. As a disease *per se*—a disease of the brain and membranes not necessarily accompanied by any other pathological changes of the liver, stomach, kidneys, etc., alcohol would but stand as the etiological factor, and shock or accident as the immediate exciting cause. This violent type of delirium tremens I have observed always occurs in daily moderate consumers of large quantities of diluted alcohol, in whatever form, for a long time. It never takes place in old drunkards as the result of over-saturation of the system, nor does this type, to my knowledge, ever manifest itself in the uninitiated as the result of a prolonged spree or a temporary excess. It differs from mania a potu in so far as the latter is never accompanied by the characteristic tremor, and is always a type of temporary mental derangement, resulting invariably from a history of acute alcoholism. Again, in the former, the temperature is always high, and hallucinations and delirium are bad, while in the latter there is generally no fever, and regular mania with delusions invariably characterize it. Besides, in mania a potu the maniacal delusions and paroxysms are brief in duration, the homicidal tendency always present, and recovery the rule.

So far as I have observed, the appreciable pathological changes in the brain and membranes are confined to passive congestion, or hyperæmia of the membranes, and slight œdema of the brain substance. In neither of the two cases "posted" was there any indication of hemorrhagic extravasation in the cerebral substance. In all of these cases there was absolutely nothing pointing to uræmia nor traumatic meningitis, and we are certainly not justified in entertaining the possibility of idiopathic meningitis (if there is such a disease) independent of the etiological factor, alcohol, in any of them.

Is Consumption of Vegetable Origin?—There are certain bacilli that cause in the human body symptoms similar to those of tuberculosis. To this group, called by Koch pseudo-bacilli, a new member has just been added, as we are told by *La Médicine Moderne* (*Lit. Dig.*) It was discovered by M. Moeller on a kind of grass that grows abundantly in certain parts of France. Says the writer of the notice: "In studying this grass, M. Moeller discovered a bacillus that has points of resemblance with the Koch bacillus even more striking than those of the other pseudo-bacilli of tuberculosis. The resemblance is even so strong that we may ask in what respect the false bacillus differs from the true. After describing numerous experiments which show that the action of this vegetable parasite is practically the same as that of the real tubercle bacillus, the writer suggests, following the lead of Rabinovitch, a Russian investigator, that it is nothing less than the tubercle bacillus itself, modified by environment. He says: 'This would be an interesting point to elucidate. Up to the present time vegetables have not been suspected of harboring parasites of the tubercle family. Is it possible that grasses may give refuge to a variety of the Koch bacillus, living on their stems as saprophytes and capable, by passage into the stomachs of cattle, of acquiring virulent activity as the bacillus of human tuberculosis? We know that another parasite, that of actinomycosis, has been found on the beard of wheat. The hypothesis of a similar habitat for the tubercle bacillus has nothing improbable in it.' M. Moeller has also observed in cow-dung a microbe which, while non-tuberculous, is a pseudo-bacillus like those of Koch. It is reasonable to suppose that this came from the grass on which the cows fed. Other pseudo-bacilli may follow the same course. "Is it possible," asks the writer in conclusion, 'that we are on the way to discover a vegetable origin for tuberculosis?'"

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"Every man should be more ready to interpret any obscure proposition of another in a good rather than in a bad sense. If, however, he cannot defend the proposition in any way, let him inquire of the speaker himself, and if then the speaker is found to be mistaken in sentiment or understanding, let him correct the same kindly. If this is not enough, let him employ all available means to render him sound in principle and secure from error."—IGNATIUS LOYOLA.

YELLOW FEVER.

THE reports which reach us from Cuba, more especially from Santiago, where, in Gen. Wood, the science of the practical physician has been united with the energy and executive ability of the honest, far-seeing governor, shows conclusively how much can be accomplished in the prevention of disease and how much more easily it is to prevent the development of a poison than to combat it when it is flying on the wings of the pestilence. Cuba has long been the nidus of one of the most terrible scourges which has ever decimated the human race, almost closing its ports at certain seasons of the year, and a menace to the entire Atlantic Coast. Central and South American ports were, and are now to a certain extent, homes of the pestilence. Vera Cruz, in Mexico, under modern sanitary regulations, the abundance of water from the mountains and ample sewerage, is now one of the most healthy of the cities formerly scourged with yellow fever.

The past few years, so rich in the developments of science in isolating the cause of disease and arming the profession and the public with the means of prevention and the weapons of destruction, have not been without results of the greatest value in the study of yellow fever. The problem of prevention has been to a certain extent solved in sanitation, and the secret of its cure unlocked by the experiments of Sanarelli and the practical scientists who have aided him in his investigations. The story of Professor Sanarelli's discovery of the yellow fever germ was published at the time. Professor Sanarelli studied in Pavia, Italy, and then in Munich, and finished under Pasteur in Paris. In 1895 he went to Uraguay with the determination of making a close study of yellow fever and of finding, if possible, a means of cure.

He succeeded in producing a toxine that gave animals all the symptoms of yellow fever, and then was ready to try it on human beings, when he was asked by Brazil to experiment in San Carlo do Pinhal, a hotbed of the disease. This place had contained 27,000 inhabitants, but the population had fallen to 1,000 when Professor Sanarelli went there. The mortality was as high as 8 or 90 per cent. in yellow fever cases. He was supplied with his anti-amarillic serum, as he called it, obtained from animals that had been vaccinated against the icteroid bacillus, containing a dose of yellow fever virus several times stronger than that required to produce death. His experiments were carefully noted, and successful, reducing the rate of mortality among patients to 27 per cent., and absolutely preventing the spread of the disease.

Under the direction of the scientific and most energetic and efficient health officer of the Port of New York Dr. Doty, the investigation as to the cause of yellow fever was begun at Quarantine in the spring of 1897, some months before Professor Sanarelli, of Montevideo, published the result of his experimental work in this direction, in which he claimed that he had isolated the specific organism of yellow fever.

In the spring of 1897 a number of cases of yellow fever were brought to this port and transferred to Swinburne Island. Autopsies made at this time furnished an opportunity to test the value of Sanarelli's work An organism was soon found, which proved to be identical with that described by this investigator, when compared with the culture sent by Professor Sanarelli to Dr. Doty. After Sanarelli had isolated what he regarded as the specific organism of yellow fever, he inoculated animals with the culture of the same, and claimed to have succeeded in obtaining a serum which cured yellow fever, both in men and animals.

The same experiments were tried in the laboratory of the Health Office at this port by Dr. Doty with precisely the same results.

Dr. Doty gives the opinion as the result of the

experiments conducted at the laboratory under his direction "that Sanarelli was correct in his conclusions; that he had found and isolated the specific organism of yellow fever, and that the serum which has been obtained both by Sanarelli and the Health Department of the State of New York has both curative and preventive properties, at least in animals.

"Its effect on the human being is yet to be seen. However, I am looking forward to the most favorable results. While in Havana last March, I made arrangements with my representative there to be prepared to use the serum in cases which would probably come under his personal care, provided the experiments here justified me in forwarding some of it to him. A supply of the serum is now being prepared for this purpose and will be sent to Havana in a few days. It is harmless, and I have no hesitation in urgently recommending its use."

Shortly after the alleged discovery of Prof. Saranelli, in 1897, of the yellow fever bacillus and the preparation of a toxin, Surgeon General Wyman, of the Marine Hospital Service, appointed Surgeon Eugene Washdin and Passed Assistant Surgeon H. D. Geddings to thoroughly investigate the matter on the lines indicated by Prof. Saranelli. The investigation has been completed, and the report is now being prepared for pulbication. The work of Dr. Doty, however, seems to be conclusive, as it regards the identity of the bacillus, and we look with great interest for the report of the work of the toxin he has sent to Cuba, and by the request of Mexico to Vera Cruz.

TUBERCULOSIS CONGRESS.

THE subjects considered at the Berlin Congress, at whose session, recently closed, some of the ablest specialists of the civilized world participated in the discussions, were: (1) etiology, (2) prophalaxis, (3) therapeutics. While the congress did not set the seal of its approval upon the Koch lymph or any royal road to the cure of consumption, it pointed out its etiology and emphasized the value of pure air and exercise, and the necessity of State prevention. Prof. Virchow was most emphatic in his statement "that on the basis of pathological experiment tuberculosis is not hereditary, as it is never found in unborn or newly born children." There is no doubt of the fact that children born of sickly parents should be carefully nourished and trained to fully develop the system and fortify it by its vigorous strength against the attacks of tuberculous germs. If the system is properly nourished there is always a fair prospect of cure, in the earlier stages, if the patient can enjoy fresh air without being exposed to violent changes of temperature. It is now generally understood that pure cold air starves the germs, that rest and plentiful food enables the system to rally against their attacks, that violent exertion is the worst thing that can be recommended to one of consumptive tendencies, and that the consumptive person who spits upon the floor of a street car or public hall is sowing the seeds of a fearful disease. A healthy person, leading a healthy life, so great is the power of vital resistance, need not fear the occasional assault of tuberculous germs, but lowering the vitality from any avoidable cause opens wide the door to danger. With a better understanding of the cause of consumption, obtained from the study of the propagation and action of tuberculous germs and the soil in which they best flourish, the campaign against the disease has been carried on during the last few years with an ever increasing success.

In Great Britain the prevalence of tuberculosis has decreased about 50 per cent. in as many years; every form of tuberculous disease sharing the diminution except *tabes mesenterica*, a species of infantile bowel troubles, often caused by tuberculous milk. Still in spite of the decrease 60,000 persons die annually in England and Wales from consumption. The census of the United States for 1890 shows that in that year 102,199 deaths were attributed to consumption. What the death rate is at the present time it will be impossible to determine until the completion of the present census. The question of suppressing, as far as possible, a disease so widespread and so fatal in its terrible ravages, is wisely becoming one of great national importance, stimulating a more vigorous action in every great center of population.

The rules of the New York Board of Health require an inspection of every tenement in which there have been three deaths by consumption within two years; the landlord may be ordered to remove all wall paper, to wash walls and ceilings with hot water and soda and to repaper.

The rules will be made more severe as time goes on. By such means, by the new regulations governing the construction of tenements, by the opening of park spaces and the rigid inspection of food and meats, the Board of Health of New York expects to force the death rate still lower.

Consumption would work far less harm than it does but for the constant influx of foreign residents. These bring the seeds of the disease in their lungs; they herd in unsanitary quarters and, until acclimated, they are peculiarly liable to lung trouble.

How true this is, a house to house canvass in the Sixth Ward was revealed. In the Bowery, Chatham, Mott, Mulberry, Baxter, Bayard, Pell, Doyers, Park, Worth, Pearl and Leonard streets and City

Hall Place, forty-four houses were found in which 200 fatal cases of consumption had developed in three years. In one house there had been fifteen deaths from this disease alone.

These houses are centers of contagion. But even in the country there are "fine old family mansions" in whose dark walls lurk the seeds of tuberculosis; from whose darkened doors the corpses of the victims of folly and negligence have often been borne.

If every house in which a consumption patient had died, in city or country, should be so thoroughly disinfected that there would be no possibility of any of the germs remaining, it would be a long step toward the eradication of the disease.

HOSPITAL IMPROVEMENTS.

MOUNT SINAI HOSPITAL, now located on Lexington avenue and Sixty-seventh street, is erecting a much more commodious and complete home on the block bounded by Fifth and Madison avenues and One Hundred and One Hundred and First streets. The new hospital will consist of a group of buildings, each one appropriated to a specific work. The Fifth avenue front will be devoted entirely to the private departments. Fronting the One Hundredth street side will be the administration building, flanked on either side by buildings containing the medical and surgical wards, obstetrical and children's departments, and home for the Training School. The latter will contain every facility for the comfort of the nurses, including not only sleeping rooms, but library, parlor, lecture room and diet kitchen for the preparation of food for the sick. The roofs of all the building are to be flat and partially enclosed, so that they may be used as roof gardens for the patients both in summer and winter. Some of the improvements outlined in the new hospital might easily be introduced into other hospitals with great advantage, not only to the patients, but, what is equally important, the working staff.

It is an axiom in every successful business enterprise, and applies with even greater force to hospitals than to commerce, for in the former human life is at stake, that good service can only be secured by fair compensation. In hospital service the salary in dollars and cents is only a small part of the compensation due to the nurse. That is only intended to cover merely personal expenses and is much less than could be obtained for easier work with shorter hours in almost any other employment. The real compensation is the scientific instruction in the lecture room, the discipline and routine of the hospital and the practical training in all the details of skilled nursing, which can best be obtained there. The service is given with the expectation that it is to be guided in such a direction and utilized in such a way as not only to meet the wants of the institution but prepare the giver for the arduous and exacting work of one of the most useful and important departments of the medical profession. The hospital is, in part, an educational institution, in which every facility should and must be given, if it expects to stand well with the public in the thorough training, scientific and practical, of those who are to carry out the instructions of the physicians and surgeons, not only in hospitals, but in private families. In all this, to insure success, there must be not only intelligence and kindly discipline, but practical rules which will insure the comfort and health and stimulate to the performance of the best and highest type of work.

The Training School for Nurses at the Metropolitan Hospital, Blackwell's Island, is about the same age as that of the Hahnemann Hospital. The former has a building devoted exclusively to the nurses, where, when not on duty, they can enjoy all the comforts of home. This home includes parlor, library, drawing and sleeping rooms. The occupants feel that their contract with the hospital is fully carried out in the care given to their health and personal comfort, and they are prepared to render better service than it would be possible to give under any other system. There are other hospitals less favored, but in all ample acommodations for the comfort and proper training of nurses could easily be introduced at a trifling expense. The Hahnemann Hospital, for instance, lacks some of the most important facilities for the comfort, the instruction and the health of the employees, which could easily be supplied by a little of that intelligent financial management seen in any other successful department of business. There is sufficient room for a building adjoining the hospital and connected with it, which would give ample facilities, equal to any other in the city, for the comfort and the proper care of one of the most important departments of the institution, one upon which much, very much, of its popularity and success depends. This annex would include the sleeping rooms, the library, parlor, lecture room, and laboratory, and form an educational and social home. The expense for erecting and furnishing the building would not be large; the money could be obtained without the slightest difficulty, and the results would increase the influence and popularity of the hospital four fold, enabling it to do better work and furnish to the public a higher and more thoroughly trained class

of nurses. Give the real workers in every department of a hospital a chance to do good work and there need be no fear of failure.

AMERICAN INSTITUTE OF HOMŒOPATHY.

AT the recent meeting of the American Institute of Homœopathy, at Atlantic City, Dr. M. O. Terry, ex-Surgeon-General of the State of New York, read a very able paper before the Section of Sanitary Science on "Some Military and Public Questions," including the responsibility of proper sanitation in the army of the United States, which was received with marked attention and approval. Dr. Terry said:

"The absolute necessity of a Medical Department, distinct by itself, under its own direction, the same as any other department of government, was so apparent in the English campaign in Egypt, when the same trouble was experienced as in our recent Cuban campaign, that the medical profession in Great Britain united as one man in an appeal to Parliament for a medical organization having the same power in its special work as any other department of the government. The result was an act by Parliament under which the medical service is now directed with ample power to carry out all of the details of its work in its own way. The experience of England and the lessons taught in our Cuban Campaign enforce with a strong argument of facts the absolute necessity of a new portfolio in the executive cabinet of our Government—that of 'Medical Director General,' with powers clearly defined as in other cabinet positions.

"This portfolio, like all of the others in the Cabinet, should be filled by appointment by the President and confirmed by the Senate.

"During the Hispano-American war the medical staff officer of the War Department, the Surgeon General, received a continual volley, as it were, of criticism from various sources, charging him with neglect and lack of forethought in regard to supplies and sanitary precautions in our various camps and in Spanish territory. Under the circumstances, in view of the fact, as I understand it, that the Surgeon General has not had the proper opportunity of carrying out his ideas, it would hardly be fair to acquiesce in the criticism which has arisen, when we take into consideration his limited authority. He, however, has been given the credit of assuming great responsibilities, which really belong to the War Department. In certain directions his opportunities of exercising not only medical bias but personal preference are very great.

"What constitutes proper sanitation in the army under varying conditions, and just where to locate neglect, becomes a rather mooted question at times. When camps have been selected without consulting the Surgeon General of the army, as in our last war, it is evidence that what was said in reference to the commanding officer deciding questions which came naturally under the head of the Medical Department is quite as proper of the Secretary of War. We believe that the selection of a camp is a matter of such great importance that a commanding officer, a sanitary engineer and a medical officer should constitute such a board or commission for the proper selection of such camps; that they should be continued in camp as a board, and held, as such, responsible for the sanitary condition."

Dr. Terry presented the following:

"*Resolved*, That in the opinion of this association, the oldest national medical organization in the United States, the condition of the country and its standing among the progressive nations of the world demands for its medical department a position in the Cabinet equal, in all respects, to the other departments of the government."

STATE MEDICAL EXAMINING BOARDS.

PREVIOUS to the organization of State medical examining boards some of the medical colleges had boards of censors, the members chosen from the profession outside of the college. Since every physician must go through an examination by State examiners before he can practice in that State, of what use is the board of censors? None whatever, as we can see. The examination for a degree by the college faculty and for license to practice by the State is certainly all the legal protection the public needs of the scientific ability of its medical men to engage in their professional work. Let them stand or fall according to their intelligence. We heartily concur in the necessity of State examinations, but we do not concur in that exclusiveness which limits the authority to practice to the State in which the examination is held. This is carrying State rights to a ridiculous extent, certainly not justified in an educated profession. It is not only humiliating but an imposition for a physician of recognized ability and of excellent standing, with his college diploma and a certificate from the board of the State in which he resides, to go through another examination, paying another fee, before he can practice in another State, in which, perhaps, he may be temporarily located.

There is in this matter a lack of inter-State courtesy productive of no possible good, but creating useless annoyance and expense. Would not the interests of the profession and the protection of the public be amply secured if a certificate from the board of one State be recognized by all the other States in the Union? If not, would there be any infringement of State rights if a central ex-

amining board was organized under the direction, perhaps, of the Bureau of Education in Washington, made up of representatives from all the examining boards of the United States? In this case the examination, so far as scholarship is concerned, would be precisely alike, and the license to practice binding upon every State in the Union.

If the laws relating to these matters could be codified, with such additions or alterations as seemed warranted, we are confident a result would be reached most satisfactory to the profession and the public. We appeal to our Board of Regents, who have shown such zeal and intelligence in elevating the standard of medical education, to give this matter the most careful consideration, and prepare a code, simple but effective, in which justice and common sense will be the prevailing elements. There are too many laws on the statute books. The time has come to codify them.

A NEW TONIC.

THEORETICALLY, Tripler tells us how liquid air, which is now creating such a sensation in the scientific world as to the possibility of its future, can be utilized in the sick room in creating a perfectly pure atmosphere, entirely free from poisonous gases and microbic life, and the cold dry air kept at any temperature desired.

The *Bulletin of Pharmacy* gives us a remarkable result of an experiment of a Russian physician, in which the most wonderful results were obtained by the new agent. A dog was placed in a room with the temperature lowered to 100° F. below zero, and kept there for ten hours. Instead of being frozen to death the dog was taken out not only alive, but with an enormous appetite. The physician then tried the test on himself, and after ten hours' confinement in the still, dry, cold atmosphere his system was intensely stimulated. So much combustion had been required to keep up sufficient warmth to sustain life that an intense appetite was created, so keen that it was not easily satisfied. The process was continued with the man and dog and both grew speedily fat and vigorous.

The story seems a little problematic as it regards the 100° below zero for ten hours, but we abundance of evidence to show that an intense cold can be borne in a still atmosphere for hours. Col. Albright, the first governor of Dakota, has told us that he has driven fifty miles with the temperature 40° below zero, with no apparent discomfort. At the end of the trip there was no disposition for alcoholic stimulants, but an intense desire for food.

There is no doubt that the temperature obtained from liquid air will in the future be a most important factor in the treatment of various diseases with which such poor success is now obtained with the best known remedial agents.

MENU.

THE proper arrangement of the courses at a banquet, which generally includes a great variety of dishes, requires something more than artistic and epicurean skill, a knowledge of the digestive powers of the stomach, one course following another in a way best suited to its condition. It is astonishing how much and how large a variety of food can be consumed at a meal when the courses are properly arranged and the time lengthened out with pleasant conversation. The French probably excel all other people in the proper arrangement of courses of food and wines. The origin of the menu in the sense of a written or printed enumeration of dishes at a public dinner is 400 years old. It was in the year 1408 when the Count Hugo de Montfort noticed at a banquet given in honor of the Diet of Reyonsburg that the Duke of Brunswick had near his plate a parchment which he consulted from time to time. When asked the purpose of the parchment the Duke told him that he had ordered his head cook to write upon it in order the various dishes to be served, so that he might reserve the necessary appetite for those he liked best. This idea was gradually amplified by artistic chefs, so as to make a banquet not only an artistic success, but an epicurean poem. The most successful banquets are not those in which the guests are gorged, but where they rise from the table with no feeling of oppression, but rather with one of entire comfort and satisfaction. The most successful after dinner speakers eat and drink very moderately, generally confining their wines to one variety.

ABUSE OF THE PIANO.

THE piano is considered among all classes who are able to own or hire one as an important element of education. Scarcely is the young girl able to span an octave before she is set to work pounding the keys hour after hour each day until her education is supposed to be complete. Very few become accomplished musicians, and when the practice is no longer compelled, it does not take long to lose whatever proficiency they may have obtained.

A prominent writer, Dr. Waitzhold, who has noticed the great prevalence of nervous maladies among the fair sex, thinks he has found in the abuse of the piano one of the fruitful causes of the neuroses and chlorosis from which many

young girls suffer, and which seem to be alarmingly on the increase. He therefore urges that the custom of compelling young girls to hammer on the piano before they are fifteen or sixteen years of age be proscribed b public opinion.

He cites figures showing that out of 1,000 young girls studying the piano before the age of twelve years, 600 were afflicted with nervous troubles in later life, while of those who began to learn the piano in later life only 200 suffered in like manner. Of those who never touched the instrument at all only 100 were similarly affected.

CLIMATE AND SKIN DISEASE.

AT the May meeting of the American Climatological Association, Dr. L. B. Bulkley read a very interesting paper upon climate in its influence upon the skin. Of course, the author in speaking of climate referred not alone to meteological conditions, but to the manner of life, in exercise, food, and clothing under those conditions. Climatic influence upon the skin, he said, may be judged first from the production of diseases of the skin. Leprosy seems to require certain climatic conditions for its existence not fully understood. It is not especially favored by cold or heat, nor by dampness or dryness. It spreads in Hawaii and in Iceland. It failed to spread in the United States, though introduced into Minnesota. Not a single case of acquired leprosy has occurred in New York, though lepers have been almost constantly in the city, It is not now even thought necessary to isolate them, although at one time two or three of them were confined to North Brother's Island. Eczema is much more common in our changeable climate than in warm or cold, but more equable countries. It is aggravated in cold, damp weather. It is often better in high altitudes or at the South. It is usually aggravated in the damp air near the Great Lakes. Psoriasis is not near so common in the tropics. Acne is usually worse at the sea shore, and boils occur there more frequently. Parasite diseases of the skin are worse near the sea shore.

CARBOLIC ACID IN TETANUS.

STRONG ground is taken by Horatio C. Wood, Jr., (*Merck's Archives*, May, 1899,) in favor of carbolic acid in the treatment of tetanus. This method, which originated with Baccelli, has in recent years attracted the increasing attention of Italian clinicians, but does not appear to have been adequately tried in other countries. From time to time various observers have reported cases of tetanus treated by this means with such brilliant results that if only one-half of the claims were true this drug would still offer a prognosis far more favorable than any method at present employed. And the cases reported come from so many different observers that it is impossible to question the accuracy of their statements..

Baccelli's method is as follows: If the tetanus is of traumatic origin, the wound is thoroughly cleansed with a strong antiseptic solution, (either corrosive sublimate or carbolic acid). The patient is placed in as quiet an apartment as can be obtained, the ordinary rules of diet, etc., are carried out, and sub-cutaneous injections of a 2 per cent. solution of carbolic acid given at two or three hour intervals. If the case is one of only moderate severity, commencing doses of about 0.20 gramme, (3 grains) in the twenty-four hours, may be used. This dose should, however, be rapidly increased to at least double or triple the quantity. It is remarkable what heroic doses of carbolic acid tetanus patients will bear. Along with the carbolic acid other remedies, as morphine or chloral, may be given, as thought necessary.

The success obtained by this method of treatment is almost incredible. It would seem to alter the prognosis of tetanus almost as entirely as antitoxin has that of diphtheria. Ascoli has made a careful analysis of the results obtained by the use of carbolic acid, of Behring's antitoxin serum and of Tizzoni's serum, other antitoxins being excluded in order to have a more uniform basis for comparison. The summarized tables tend indubitably to show that carbolic acid far surpasses the serum treatment in life saving power. Besides, Ascoli claims for carbolic acid that it causes no secondary symptoms, which can hardly be said of the antitoxin, and that it is cheap and readily obtained.

In conclusion, from the study of Italian literature, it would seem that:

1. Carbolic acid gives better results in tetanus than does the antitoxin treatment.
2. It acts by antagonizing the toxin and by quieting the nervous system.
3. It should always be given hypodermically, and in large enough doses, cases of tetanus being remarkably tolerant towards it.
4. Other methods of treatment should be continued, of which the discoverer lays especial stress on the local disinfection of the wound.

A NEW OVARY.

THE *Medical News* of April 29 gives the details of a case where a bilateral oöphorectomy had been performed and a healthy ovary transplanted from a woman whom it was necessary to render sterile. Of course the matter was fully explained to both women. The experiment was entirely successful.

NASAL ORIGIN OF NERVOUS PROSTRATION.

DR. THOMAS F. RUMBOLD, in a paper on this subject, maintains that the nervous prostration commonly attributed to "overwork" is really caused by chronic nasal inflammation, most frequently resulting from excessive indulgence in alcohol, tobacco and venery. These habits increase the congestion of the nasal mucous membrane, producing a tendency to "colds," and since the blood supply of the upper two-thirds of the nasal passages, the anterior and posterior ethmoidal cavities, the sphenoidal cells, and the frontal sinuses, is derived from within the cranium, the vascular paresis, commencing at the periphery, gradually extends to the brain. It is this disturbance of the cerebral circulation which gives rise to the irritability of temper, deficient power of mental concentration, forgetfulness, insomnia, desire for change and excitement, together with bodily exhaustion and loss of ambition, commonly ascribed by the physician to continuous application to business or professional duties.

THE PULSE AS A SIGN OF NEURASTHENIA.

ALMOST the only objective sign of neurasthenia is an irritable heart. Erben (*Wein. Klin. Woch.*, No. 24) has studied this condition especially, and has discovered the following peculiarity: If the patient is made to stoop, the pulse rate, instead of being quickened, as is normally the case after every movement of the body, suddenly slows down for three or four beats, and then gradually recovers or exceeds its original frequency. The stooping usually causes slight temporary cyanosis. This Erben attributes, not to rise of the blood pressure, but to stimulation of the vagus by the increased venosity of the blood. Bending the head backward as far as possible also gives rise to the phenomenon, which is not elicited when the nervous system is healthy.

MODIFIED SMALLPOX INOCULATION.

DR. C. H. TEBAULT, in *Gaillard's Medical Journal* for January, recommends modified inoculation as safe and certain means of arresting smallpox on its first appearance, by limiting it to the earliest cases.

To practice this method, it is simply necessary to obtain the smallpox lymph in the vascular stage only, admix the same thoroughly with a few drops of fresh warm cow's milk, and then operate precisely as for vaccination. Thus produced, the disease is not communicated by contact or contagion. The advantages of the method are stated as follows: (1) No doubt can exist as to the strength or freshness of the virus, since the physician gets it directly and knows all about it from the first. (2) Should a father enter his own home attacked by smallpox, every member of his family can be protected through him, and no questioning would be required. (3) Modified inoculation protects more rapidly than the best possible vaccine virus, for every medical practitioner who has seen much of smallpox knows that it has repeatedly overtaken vaccination, two weeks and even less after the successful performance of the latter, while in the author's experience modified inoculation has arrested smallpox, even in the papular stage. (4) Modified inoculation would make it unneccessary to provide for compulsory vaccinations when no physician employing the humanized or the bovine virus can vouch, personally, for its freshness and purity. (5) Modified inoculation can be made stronger or weaker, to meet any required case of emergency; stronger, for example, in cases prudently needing a second or third protection. (6) One or two modified inoculations would answer for a lifetime, whereas one-third of the revaccinated will make a response, if vaccinated with reliable virus every third year. () A vaccinated patient will actively respond to modified inoculation in a year, and even a smallpox patient, after recovery, will slightly or positively respond to modified inoculation in the second, and even the first year.

ANÆSTHESIA IN OBSTETRICS.

SEVERAL years since, when the question of giving chloroform in ordinary labor cases was brought into prominence through a courageous utterance on part of the late Fordyce Barker, we took occasion to express unqualified approval of the practice. We now rejoice to find ourselves supported to the fullest extent in this position—then quite generally regarded as extreme—by the foremost authorities, both in this country and abroad. Thus, Dr. James R. Wallace, in his just published "Analysis of Eight Hundred and Fifty-three Midwifery Cases, Chiefly Operative," concludes, with regards to anæsthesia, as follows: "I do not think any case of labor ought to proceed without chloroform. It seems heartless and cruel to deny to the parturient woman the complete relief that chloroform offers to her in her suffering. I never attend a single labor without offering the patient the benefit of chloroform. I press on her the comfort and relief it gives, and, as a rule, it is accepted. Once used, it is always asked for till the trouble is over. Chloroform assuages the agony of labor, it does not lessen the contractile and expulsive power of the uterine forces, and it is always safe. I believe in a large majority of cases in which labor is being impeded by rigidity of the os, chloroform overcomes the resistance, and labor is easily concluded. By this simple and absolutely safe narcotic all the terrors of childbearing are removed, and suffering womankind

is placed within reach of a blessing of the most incalculable value."

Mulheron, in the *Medical Age*, is equally emphatic: "I believe," he says, "that obstetrical anæsthesia, as distinguished from surgical narcosis, is not only free from danger, but is a positive benefit to the parturient woman."

The controversy which began when Simpson, single handed, fought the theologians and their allies upon this issue fifty years ago, is practically closed. Chloroform, henceforth, must be recognized as an auxiliary no less indispensable in the lying-in room than on the operating table.

WHEN the distinguished author of "Cellular Pathology," Professor Virchow, gets out of his specialty and begins to generalize on national questions, he is apt to become a little mixed and to utter sentiments which, in one of less profound intellect, would be looked upon as the twaddle of an empty mind. Just now he is decidedly down on America. He believes all wars to be barbarous and unjust, and thinks that the United States, through the criminal action of brainless demagogues and the notorious incapacity of its rulers in plunging recklessly into an unjust war, gives a contemptible example of weakness and has sinned against humanity and civilization. How easy it is for men, and women, too, because they have a certain amount of knowledge on matters upon which they have devoted some study, to imagine they know it all, and their opinion upon great public questions about which they know nothing, is of some importance. Perhaps it is to themselves, but the world moves on notwithstanding, and its great problems are settled by wiser heads and more earnest, far seeing minds. Because you are a good pathologist, Dr. Virchow, you still may have no claim to statesmanship.

THE Woman's Medical College of the New York Infirmary for Women and Children ceased to exist as a distinct institution at the close of the present collegiate year. The infirmary, however, will continue its work, furnishing with its clinical facilities very important post-graduate instruction for women. This step has been taken from the fact that the medical department of Cornell University, recently established in this city, with an ample endowment, admits to its classes male and female medical students on the same terms, both following the same line of work and under the same instructors. The college was inaugurated when female students were not admitted to medical colleges, but wiser councils prevail, and as the sexes are to work side by side in the profession it is no more than just that they work together in their education.

DR. ALFRED STILLÉ, of Philadelphia, Emeritus Professor of Theory and Practice in the University of Pennsylvania, and editor of the *National Dispensatory*, was married on the 14th of June, the bride being fifty-nine and the groom eighty-six years of age. The wife of Bishop Hurst, of the Methodist Church, who is thirty years of age, is seeking a legal separation from her husband, who is seventy years old, on the ground of incompatibility of temper. Only forty years' difference in age. Unless both were saints, and even bishops sometimes have tempers and are rather set in their ways, what could be expected?

BIBLIOGRAPHICAL.

A TEXT-BOOK OF ANATOMY. By American authors. Edited by Frederick Henry Gerrish, M.D., Professor of Anatomy in the Medical School of Maine, Bowdoin College. Lea Brothers, Philadelphia, 1899.

This book, with its 950 engravings in black and color, does ample credit to its authors and publishers. We heartily welcome a work on anatomy so practical and complete that the student and practitioner alike can arm himself with the requisite facts of the subject without going through an endless array of dry, unimportant text. We do not know of a work in which the subject, by the directness of its information and excellence of illustrations, offers an equal amount of practical knowledge to the student. The fact that the work is by American authors adds to its interest, as heretofore anatomical works have been importations.

W. F. H.

THE MEDICAL COMPLICATIONS, ACCIDENTS AND SEQUELÆ OF TYPHOID OR ENTERIC FEVER. By Robert Amory Hale, M.D., B.Sc. With a special chapter on the Mental Disturbances Following Typhoid Fever, by F. X. Dercum, M.D. Lea Brothers & Co.

Every physician meets with cases of typhoid fever in which the manifestations are so puzzling and obscure, the disease being so attended by internal affections and complications as to make the diagnosis extremely difficult. It is to meet these cases, to which but little attention is given in text books, that this work is prepared. The subjects are well handled, and the book will be useful to the profession.

SAUNDERS' MEDICAL HAND ATLASES. Atlas of Diseases of the Skin, Including an Epitome of Pathology and Treatment. By Professor Dr. Franz Merack, of Vienna. Edited by Henry W. Stelwagon, M.D., Ph.D. With sixty-three colored plates and thirty-nine half-tone full page illustrations. Philadelphia: W. B. Saunders.

The illustrations in this atlas are so lifelike that they present to the reader almost as clear a picture as the disease itself. The pathology and treatment include the latest and most advanced ideas upon the subjects discussed, which cover nearly the entire range of skin diseases.

TEXT-BOOK OF OPHTHALMOLOGY. By Dr. Ernest Fuchs, Professor of Ophthalmology in the University of Vienna. Authorized translation, revised from the seventh enlarged and improved German edition, by A. Duane, M.D., Assistant Surgeon Ophthalmic and Aural Institute, New York. With 277 illustrations. Second American edition. New York: D. Appleton & Co., 1899, pp. 860. Octavo.

Since the first edition of this book was published, five editions have appeared in German, each characterized by thorough revision. The work is in accord with the science of to-day, and many illustrations have been added to this

edition. The translator has introduced two new sections. The work has been favorably received in this country, and the present edition will be found much improved over the other. Prof. Fuchs treatise has the merits of lucidity, judicious treatment of the subject and excellence of balance. The general practitioner will find this work of great service.

THE DISEASES OF THE NERVOUS SYSTEM. A Text-book for Physicians and Students. By Dr. Ludwig Hirt, Professor at the University of Breslau. Translated, with permission of the author, by August Hoch M.D., formerly Assistant Physician to the Johns Hopkins Hospital, now to the McLean Hospital, Waverly, Mass., assisted by Frank R. Smith, A.M. (Cantab), M.D. Instructor in Medicine in the Johns Hopkins University, with an introduction by Wm. Osler, M.D., F.R.C.P., F.R.S., Professor of Medicine in the Johns Hopkins University, etc. With 181 illustrations. New York: D. Appleton & Co., 1899, pp. 715. Octavo.

Prof. Hirt's classical work has become a standard text-book the world over, and is so recognized by both teachers and students. The illustrations are mostly original and of excellent character. The text is lucidly and concisely written; at the same time the subjects are thoroughly treated. It is just what its title indicates, and will be found a safe guide in its department of medicine.

A. T. W.

TWENTIETH CENTURY PRACTICE. An International Encyclopædia of Modern Medical Science. By leading authorities of Europe and America. Edited by Thomas L. Stedman. M.D. In twenty volumes. Volume XVI., Infectious Diseases. New York: William Wood & Co., 1899.

The volume opens with an exhaustive treatise on lobar pneumonia, covering 140 pages, by Andrew H. Smith. The second article, to which seventy-five pages are given, is by A. Netter, of Paris, on Cerebro-Spinal Meningitis. Dysentery, by A. A. De Azevedo Sodré, of Rio de Janeiro, occupies eighty pages. Forty-five pages are given to Yaws, by H. Alfred Nicholls, Dominica, W. I.

Ernest Ziegler, of Freiburg, contributes an interesting article on Inflammation, and Otto G. T. Killani, of New York, one on Erysipelas.

Fevers, Simple, Continuing, Relapsing and Typhoid, are very ably discussed in all their varieties and phases by Landon B. Edwards, of Richmond, Va.; Leo Popoff, of St. Petersburg; John S. Thatcher and John Winters Brannan, of New York. The articles on fevers occupy 321 pages of the entire work, and the stories are told concisely, but with great practical and scientific accuracy. In this, as in the preceding volume, all the subjects are discussed with great fairness, and a fullness of reliable information fully up to date.

THE Newer Remedies, Including Their Synonyms, Sources, Methods of Preparation, Incompatibles, Medicinal Properties, Tests, Solubilities and Doses as far as Known. Together with sections on organo-therapeutic agents and indifferent compounds of iron. A reference manual for physicians, pharmaceutists and students. Price, $1.00. P. Blakiston, Son & Co.

THE TWELVE TISSUE REMEDIES OF SCHÜSSLER. Comprising the theory, therapeutics, application, materia medica and a complete repertory of these remedies, homœopathically and bio-chemically considered. By William Boericke, M.D., and William A. Dewey, M.D. Fourth edition, revised, re-written and enlarged. Philadelphia: Boericke & Tafel, 1899.

The idea upon which Schüssler's bio-chemic therapeutics is based is the physiological fact that both the structure and the vitality of the organs of the body are dependent upon certain necessary quantities and proper apportionment of its inorganic constituents. Any disturbance in the molecular motion of these cell salts in living tissues, caused by a deficiency in the requisite amount, constitute diseases which can be rectified and the equilibrium re-established by administering the same mineral salts in smaller quantities. This is supposed to be brought about by chemical affinity in the domain of histology.

INTERNATIONAL CLINICS, VOL. I., NINTH SERIES, APRIL, 1899. Lippincott & Co.

The essays and lectures in each quarterly volume of the yearly series includes almost every department of our profession, and the most advanced thought of our ablest writers and teachers at home and abroad. Every physician will find something of value in each volume.

DISEASES OF WOMEN; A TREATISE ON THE PRINCIPLES AND PRACTICE OF GYNÆCOLOGY. By E. C. Dudley, A.M., M.D., Professor of Gynæcology, Northwestern University Medical School. Lea Brothers, publishers.

In these days, when medical literature is chiefly in medical journals, when medical and surgical ideas are too often old and often discarded before they can be printed and bound, the art of writing text-books and treatises becomes more difficult. In a compact work, affectionately dedicated to his teacher, Thomas Addis Emmett, Dr. Dudley has written a clear, forceful and very practical treatise on gynæcology. It is an effort which will be welcomed by the student and practitioner as giving the essentials of the subject in a manner that convinces the reader that the author is drawing largely from actual experience. The subjects of pathology and differential diagnosis are well treated, while the operative suggestions are made clear and illustrated by drawings and colored plates. Attention might be directed to the section on tumors and malformations, though it is rather to be regretted that space and illustrations were used on the Beards method of pelvic massage, a form of treatment not received with favor in this country. It, however, serves to complete the subject, and makes the work well rounded in treating the diseases of women from various standpoints. W. F. H.

A REVIEW OF RECENT LEGAL DECISIONS AFFECTING PHYSICIANS, DENTISTS, DRUGGISTS AND THE PUBLIC HEALTH. Together with a brief for the prosecution of unlicensed practitioners of medicine, dentistry or pharmacy, with a paper upon manslaughter, Christian Science and the law and other matters. By W. A. Purrington, of the New York bar, counsel of the Dental Society of the State of New York, and Lecturer of Medicine and Dental Jurisprudence in the College of Dentistry, New York, and one of the collaborators in "A System of Legal Medicine," by Allan McLane Hamilton and others, etc., New York: E. B. Treat & Co., 1899, pp. 105. Price, 50 cents.

A useful little book for the purpose indicated.

DISEASES OF THE EAR, NOSE AND THROAT AND THEIR ACCESSORY CAVITIES. By Seth Scott Bishop, M.D., D.C.L., LL.D., Professor of Diseases of the Nose, Throat and Ear in the Illinois Medical College; Professor in the Chicago Post-Graduate Medical School and Hospital; Surgeon to the Post-Graduate Hospital, one of the editors of the *Laryngoscope*, etc. Second edition, thoroughly revised and enlarged. Illustrated with ninety-four chromo-lithographs and 215 half tone and photo engravings. 6½ by 9½ inches. Pages xix-554. Extra cloth, $4.00 net; sheep or half russia, $5.00 net. The F. A. Davis Co., publishers, Philadelphia.

The popularity of this book has been shown by the early exhaustion of the first edition. Two new chapters have been written, one on "Related Diseases of the Eye and Nose," and the other on "Life Insurance Affected by Diseases of the Ear, Nose and Throat." Illustrated articles on "Direct Laryngoscopy, or Autoscopy," and on "Pachydermia, Laryngis," etc., have been added.

The text has been so condensed that the volume has been kept in convenient size for students and general practitioners.

The revised edition will be even more popular than its predecessor, if we may judge by the improvements that have been introduced and they are appreciated. The text has been thoroughly brought down to date. The physical part of the work, too, is excellent.

SELF EXAMINATIONS FOR MEDICAL STUDENTS.—3,000 questions on medical subjects arranged for self-examination. With the proper references to standard works in which the correct replies will be found. Second edition, enlarged. Price 10 cts. Philadelphia: P. Blakiston, Son & Co.; pp. 189, 16mo.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.

BIOLOGICAL SOCIETY.

In order to enumerate the globules of the blood, and especially of the very fragile hematoblasts. M Hayem speaks favorably of the employment of the following liquid: Distilled water, 200 grammes; chloride sodium, 7 grammes; sulphate of sodium, 5 grammes; sol iodo-ioduret, 3 to 4 cc. This last solution is thus formulated: Distilled water, 500 grammes; iodide of potassium, 50 grammes; metallic iodine in excess, q. s.

M. Ch. Richet investigated the toxicity of thallium. One grain of thallium will kill a kilogram of animal, by intra-venous injection, sub-cutaneously. The poisoning is chronic, and causes muscular atrophy. Like lead, thallium rapidly produces keratitis; it also diminishes lactic fermentation in small doses.

M. Bouchard observed that menthol also causes lesions of the cornea. MM. Gilbert and Castaigne have studied the hepatic cell and its function in six chlorotics and in two the hepatic chemistry remained normal. In four others there was hepatic insufficiency, urobilinuria, indicanuria, hypoazoturia, alimentary glycosuria, and an elimination of methylene blue. It is probably from defective irrigation of the liver by the altered blood that the insufficiency is produced. In the same patients the gastric glands are also often deficient in functional activity.

MM. Gilbert and Castaigne also observed in a patient affected with alcoholic hypertrophic cirrhosis with hemapheic icterus, the presence in the bloody serum of abnormal biliary pigments not discoverable in the urine. This condition, which was announced by M Hayem, is frequent, and will be found by examination of the serum and urine in icterus patients. Acholuria seems to be due to a defect of renal permeability, and acholuric icterus merits a place in the study of icterus.

M. Thiercelin has investigated a microbic saprophyte which is found in conjunction with the bacterium coli, and which may become virulent and pathogenic. In the saprophytic state this diplococcus is not easily isolated, but in the virulent condition it is easily cultivated and isolable. Virulent for mice, less so for rabbits, not so for guinea pigs, it is allied to the meningococcus, and the author calls it an entero-coccus. It is the pathogenic microbe of the acute muco-membranous enteritis of children and of the adult; it also plays an important rôle in appendicitis, of which it is the prime factor.

M. Chipault has for five years obtained excellent results in the treatment of the perforating disease by elongation of the plantar nerves. He proposes this treatment also for varicose ulcers, its action being due to a proliferating super-activity of the tissues after the nervous elongation. The first operation consists in elongating the nerve in the locality occupied by the ulcer, neither too far nor too near, because of the infection of the parts near the ulcer. The nerves are the internal saphena, either at the ring or the upper part of the leg, the popliteal sciatic, the peroneal at its head or its bifurcation, and limited to the musculo-cutaneous and the external saphena. The nerves are very friable in varicose conditions; it is necessary to elongate them, not break them. The second operation varies. For large ulcers with a sanious surface, and with extensive dermo-epidermic lesions, curettage of the ulcer is necessary to transform it into a bleeding surface as healthy as possible.

MEDICAL SOCIETY OF THE HOSPITALS.

Sacro-Iliac Rheumatism—M. Galliard—Pain occurring spontaneously and from some cause is the principal symptom of rheumatism of the sacro-iliac articulation, and is often misunderstood. Lumbago rheumatism of the glutei muscles, and sciatic neuralgia are often confounded with it. M. Galliard observed an acute and febrile rheumatism in a patient affected with pneumococcic meningitis without pneumonia. In another case sacro-iliac rheumatism followed a typhoid fever, and caused besides pains along the vertebral column that gave suspicion of spinal meningitis. In still another case the sacro-iliac articulation was attacked by blennorrhagic rheumatism, complicated with crural and sciatic neuralgia.

SURGICAL SOCIETY.

Treatment of Testicular Tuberculosis—M. Berger made an important communication upon this subject. The following are his conclusions: First: At the beginning of tuberculosis, castration should be practised when the lesions are increasing, and are as yet limited to one-half of the genital apparatus. Second: The operation is not contra-indicated if the lesions extend to the vas deferens and even to the vesiculæ seminales. Third: It is necessary to resect the vas deferens, even when it seems to be intact. Fourth: In case of lesions of the seminal vesicle, it may be resected by the inguinal passage, or better by the perineum. The operation is indicated, despite tuberculization of other organs, at least if the general condition of the subject admits of it.

OBSTETRICAL SOCIETY OF FRANCE.

General Treatment of Puerperal Septicæmia—M. Macé—General infection has been treated in different ways in different countries and at different epochs. The antithermics have found in Mundé an ardent partisan. Refrigeration began in America with Playfair, in Germany with Fleshausen, at first in the form of lotions—wet cloths—afterwards in full baths every two or three hours, at a temperature even of 25°. The inefficacy of the results obtained by injection of the serums of Marmereck or Roger has led physicians to try the physical treatment again. M. Macé has been induced in consequence of success procured in a very grave case. But, according to him there are counter-indications, not solely from peritonitis and fever, as asserted by Stoltz, but by the unfavorable condition of the heart, asthenia and myocarditis. M. Fochier declares that refrigeration is much more than antithermic; it is an excellent means of restoring the great cardiac, and especially renal functions. Unlike M. Macé, he only employs it when the heart is feeble and the urine is diminished. He never lowers the temperature of the bath beyond 22°, and regulates it according to the condition of the cardiac function. He is more and more a partisan of treatment of abscess fixation, and by injections of the essence of terebinth. The abscesses suppurate in an inverse order from the date of their establishment, which indicates that the economy has need of reinforcement before reacting. M. Charles affirms that the cold bath is especially useful in stimulating the heart, the nervous system and the entire organism. As regards the anti streptococci treatment, he has been much disquieted since it has been demonstrated that there exist many varieties of this microbe, and also other pathogenic agents of puerperal infection. M. Denys, of Louvain, has differentiated sixteen varieties of streptococci, which has led him to conceive of a serum that he injects in massive doses—100 cc. M. Hubert, of Louvain, obtained by this method four cures of cases considered as very grave.

Cervical Incisions at the Beginning of Dilatation in Primiparæ—M. Fuchier having remarked that in primiparæ there often existed an abnormal thickening of the cervix, which prevents complete dilatation, thought that the resistance could be overcome and dilatation hastened by making sections of 5 millim of the uterine orifice at the beginning of the period of dilatation, when the finger can be introduced. The sections were made by him in twenty-four cases with scissors, guided by two fingers introduced into the vagina. From clinical facts the period of dilatation is diminished by the incisions which break up the muscular bands of the cervix, which resemble those at the apex of the heart. This method has the advantage of shortening the period of labor, and diminishing the chances of infantile mortality. MM. Keiffer and Charles feared the abuse of this method, and asked if the incisions could not be sometimes prolonged upward and endanger tearing. M. Delore considered that this method was indicated only when the labor was greatly prolonged. M. Gueniot admitted that the process was excellent to accelerate the labor, but should be confined to the anatomical rigidity of the cervix. M. Doleris, referring to the conjunctive structure of a tench's mouth, thought that the incision, to be effective, should not only involve the free border of the cervix, but the portion that constitutes the obstacle, viz., the muscular zone, situated higher up. He would cut with a buttoned bistoury the muscular sphincter, without touching the border of the uterus, a practice that should be confined to certain pathological cases.

Utility of Gynæcological Treatment in the Vomiting of Pregnancy—M. Audebert reported two cases in which

vomiting ceased immediately after the reduction of the retro-deviation of the pregnant uterus In the second case the sclerous uterine cervix was at first dilated and then dressed with ichthyolated gauze. M. Doleris thought it was preferable in such cases to have recourse to the reduction without acting upon the cervix. M. Guéniot said that dilatation by use of the dilator might be efficacious, but it was dangerous. The treatment of obstinate vomiting has three indications; it is necessary to act upon the uterus, upon the spinal cord and upon the stomach.

Extraction of the Afterbirth After Abortion; Abdominovaginal Pressure of Budin.—M. Chavanne reported that this method, employed by Budin since 1895 in complete abortion to expel the placenta previously decollated, had, in his hands, given great success, and required no instrumentation It was necessary, however, to give chloroform until there was complete muscular relaxation, in order that the abdominal hand could reach contact with the two fingers placed in the posterior cul-de sac, and thus detach the placenta and press it between the two hands. M. Demelin: This mode of delivery is especially indicated in cases of very protracted retention of the placenta in the cervical canal, for then the exhausted uterus is incapable of expelling the afterbirth. M. Charles did not consider chloroform necessary. M. Budin: Anæsthesia is not indispensable, but very useful. It relaxes the abdominal wall, and should be preceded by complete decollation of the placenta, and accompany reduction of the retro-deviation.

Human Anencephalous Monster Without Spinal Fissure and with Bifid Face—M. Carache brought from Turkey a remarkable specimen, no other example of such in science. The delivery was difficult, and required the use of forceps because of conformation of the head. This monster does not belong to the classification of "Geoffrey St Hilaire," as it does not present the spinal fissure which characterizes the anencephali. The interest of the specimen is in the extensive facial fissure, due to an arrest of development of the fronto-nasal evolution.

Study of the Toxicity of Urine During Pregnancy, and the Sequelæ of Normal Delivery—MM. Labadie, Lagrave and Basset—The method employed was that of Bouchard. Experimentation upon guinea pigs during gestation agreed with that upon pregnant women. During normal pregnancy, and also tubal, the poisons of the urine diminished one-half. This variation may be considered as a new sign of pregnancy, increasing the symptoms of probability. M. Charles thought that this method might lead to the elucidation of certain facts in the pathogenesis of eclampsia, but the blood should also be examined.

Presentation of Microscopic Photographs of Utero-placental Decidua in a Case of Decidual Endo-metritis—MM. Fochier and Fabre have proved the presence of white globules in mass, infiltrated into the thickness of the decidua. In a great number of these white globules diplococci were found with the morphological characteristics of gonococci. M. Bar has often found these lesions in placentæ coming from abortion. He thinks that the cellular masses are foci of degeneration, with nuclear proliferation and mortification of the cells. From this interpretation the diplococci found by M Fouchier are only nuclear debris, charged with chromatine, and easily colored by aniline.

The Physiology and Pathology of Pregnancy During the Days Corresponding to Menstrual Period—M. Bossi, of Genes, showed that during pregnancy and at the periods corresponding to the appearance of the menses, a certain number of phenomena are observed, resembling those that occur during menstruation. They constitute what he calls the menstrual periods of pregnancy, corresponding to incomplete ovulation, and are proved by anatomical examination.

Hematuria of Pregnancy—M. Treub, of Amsterdam, reported a case of hematuria in the course of pregnancy without probable renal lesion. It resembled cases previously published, small in number, by Guyon, Bar, etc. This complication was due to an active or passive hyperæmia, and the prognosis should be cautious because of the grave anæmic condition that might result.

FRENCH SOCIETY OF ELECTRO-THERAPY.

Cerebral Galvanization—The brain is accessible to the galvanic current, on condition that electrodes of large surface are employed, and employed in the following manner: The electrode may be applied indifferently on the back or epigastrium, the active electrode on the forehead. Polar effects analogous to electrotonus of the motor and sensory nerves are observed. Negative cerebral galvanization determines an increase of cerebral activity; the positive produces a diminution The constant and regular action of negative cerebral galvanization is to dissipate the effects of intellectual overwork; it causes cerebral fatigue to disappear, clears the ideas, and makes work more easy. It seems to be useful in nearly all cerebral maladies.

CONGRESS OF THE SCIENTIFIC SOCIETIES OF PARIS AND DEPARTMENTS.

Accidents Caused by Opotherapy: Their Prophylaxis—M. Masse—First: Opotherapic agents, like all medicaments, are all the more dangerous according to their activity. From this simply practical point of view a division betweeen the different agents must first be established. The thyroid body and the supra-renal capsules occupy the first place among the toxic products that should be prescribed with the greatest prudence. The thymus, pancreas and ovary may be employed in larger doses. Second: The products that are dried at a low temperature alter rapidly, and may produce botulism, hence the indications to prefer the fresh to the dried products, whenever possible. Third: The integrity of the liver, the heart and the kidneys is of great importance. Again, individual susceptibility of the remedy is very variable, hence the necessity for prescribing always with prudence, and always after ascertaining the organic condition of the patient, and also of stopping or interrupting it as soon as signs of intolerance manifest themselves Hence, also, the utility of considering the dried products as the true remedy, public sale of which should be regulated, and of informing the public of the dangers and inconveniences of the use of fresh organiotherapic substances.

ACADEMY OF MEDICINE.

Surgical Treatment of Insanity—M. Picque cited many remarkable results of his surgical practice in the insane asylums of the Seine. At the Congress of Montreal, 1897, Davenport and Hobbs stated operative effects. Many authors have observed the co-existence of genital affections in insane women, and have proved the simultaneous cure of the genital disease and the mental troubles. M. Picque made a systematic examination from this point of view of all the women of an asylum. Insane women whose mental condition is co-existent with a surgical lesion may be divided into three groups. Some of them know of the disease that is the cause of their delirium. Such was the case of a melancholic with a fistula, which was operated upon and his melancholy cured. A second group, more important, comprehends cases of women with a genital disease—fibroma, cysts, prolapsus—of the existence of which they are not aware. Sometimes there is a very mild affection, such as a vaginitis, the cure of which removes all complications. A third group is surgically interesting, as it embraces cases of mental alieniation prolonged by a simple leucorrhœa, needing slight surgical treatment. M. Picque concludes that every affection that produces a mental obsession should be subjected to surgical treatment. Operative results are very satisfactory when delirium is due to the uterus and its annexæ In cases of chronic dementia, of the delirium of persecution and of general paralysis intervention is not advisable. In sixty-three women there were only seven that had no genital complication.

Gastrectomy for Cancer—M. Tuffier exhibited a case of epithelioma of the stomach. Fifteen centimetres of that organ were removed; one year has elapsed since the operation; patient in good health.

Ossific Function of Dura Mater—MM. Chipault and Berezowsky showed the importance of the ossific rôle of the dura mater. In trepanning in order to obtain a permanent loss of the osseous substance, it is necesary to remove both one and subjacent dura mater at the same time. This is a practical fact specially important in trepanning for epilepsy, particularly the Jacksonian.

J. A. C.

Announcements are made by two regularly incorporated colleges located in Chicago, that they confer upon students the legal degree of "Doctor of Ophthalmology." One of them seems to encourage instruction by correspondence. Its course includes eight lectures and covers at the utmost a period of eight weeks. Fees are placed at $25. At the other school, attendance is apparently required, and the curriculum is divided into six days.

HOSPITAL REPORTS.

MEDICAL CLINIC ON DISEASES OF CHILDREN.*

By Augustus Caille, M.D., New York.

Professor of Diseases in Children, Visiting Physician, New York Post Graduate and German Hospitals; Consulting Physician Isabella Home and Hospital; etc.

Case I.—Congenital Lipoma.—This lady, mother of one of our little patients, asks our opinion as to the nature of a number of small sub-cutaneous tumors in various parts of her body. They are congenital lipomata, and they present a favorable prognosis. A lipoma, according to Park, is rarely congenital except in connection with lymphatic anomalies, but usually develops in adult life. This form of tumor is the commonest and most widely distributed of all tumors that occur in the human body. Save when deeply situated they are easily recognizable, having a dough-like consistence and when sub-cutaneous intimately connected with the overlying skin. In this instance no interference is necessary; if the tumor were situated over the tract of a nerve and gave rise to intense pain or neuralgia, it then should be removed; but as she is not inconvenienced by their presence, I fail to see the rationale of operating.

Case II.—Prepucial Adhesions.—This boy, who is now being placed on the table, was brought here to be operated upon for phimosis. He has not this condition but he has epithelial adhesions, which I will ask one of our colleagues to break up with this blunt instrument, and then draw back the foreskin over the glans penis. The dressing should consist of boric acid and vaseline.

Case III.—Phimosis.—Here is a little lad who wets his clothes and his bed and is looked upon as a general nuisance, all on account of an elongated prepuce. I wish one of the members of the class to come down and perform the operation of circumcision for us. The urine collects under the prepuce, itching follows, the patient then scratches himself, the foreskin becomes reddened and the boy is annoyed and annoys his surroundings. This boy has applied at the dispensary for treatment; he was given protecting salves, but they failed to relieve him and so he has consented to have the operation performed. In sewing, I prefer to use black horse-hair, because it can be seen and readily removed.

Case III.—Naso-Pharyngeal Adenoids.—The reason the mother brings this child here is because it keeps its mouth open at night and snores. This is a clear case of adenoids. They consist of pure lymphoid tissue mixed with connective tissue, and they are essentially hypertrophic growths and not true tumor formations. These patients have a vacuous appearance, with a half-opened mouth; they are sometimes more or less deaf, and they have a harsh voice, often snore loudly at night and, if the child be young, attacks of choking and night-terrors are not uncommon. Many of these children are treated for bronchitis for weeks or even months until somebody is smart enough to run his finger back in the naso-pharynx, when the true difficulty is found. I shall now introduce a mouth-gag, and insert this curette behind the soft palate, using some force in scraping all the adenoid tissue away. The hemorrhage which follows usually ceases in a short time. Before doing this operation on anæmic children inquiries should be instituted regarding the possibility of the hemorrhagic diathesis being present. This operation can be done wth or without an anæsthetic.

Case IV.—Adenoids of the Naso-Pharnyx.—Here is another case of the same nature as the one just operated upon. I will operate in the same way. If children bleed much after the operation I find it best to apply alum water to the parts, which is far better than the use of iron preparations: the latter give unpleasant coagula, which interfere with the child's comfort. One should caution the parents that if the child should vomit blood a few hours after operation they should not become frightened, as it is generally swallowed blood. The parents should be instructed to continue pouring into the child's nose alum water every two hours for the first two days and then to use a salt solution in the same way three times a day. If one operates in a filthy mouth, as in one with bacteriological diphtheria, one may get a diphtheritic inflammation in the naso-pharynx, because the germs are there. If we suspect or know that the mouth is filthy we should use some antiseptic solution for the nose and throat a week before the operation. Cleanse the naso-pharynx and then you need anticipate no difficulty. Scraping near the opening of the Eustachian tube cannot do harm, or at least, rarely does harm.

Case V.—Pleuro-pneumonia with Serous Effusion.—This child is about one year old, and was brought in here last night. The colleague who sent her in, did so that an operation for empyema might be performed; he had made a puncture and said he found pus. One of the physicians in the baby's ward also made a puncture and failed to find pus. Now the question arises, Is it a chronic unresolved pneumonia or an empyema that we have to deal with? We will make another puncture and establish the diagnosis. Percussion shows a solid portion, absolutely dull. The finger here demonstrates diminished resonance. In young children the ribs often overlap like shingles and it appears difficult to enter with a needle. I now introduce the needle. The fluid that comes into the barrel of the syringe is perfectly clear. Now, how can we reconcile the two statements made? One colleague puts in needle and finds pus; I put in needle and find a serous effusion; another colleague finds nothing. If we disinfect the syringe with carbolic acid solution and then aspirate the serous fluid, we sometimes get a turbid fluid due to the action of the carbolic acid on serum; this may be mistaken for pus. I believe the first colleague got a serous fluid which was so acted upon by the carbolic acid, and interpreted as pus. In this case the serous fluid does not require any operative interference for its removal at present.

Case VI.—Apex Pneumonia.—Here is a baby who has a peculiar cough which I wish you all to note. Without an examination of this child I can almost establish the diagnosis of apex pneumonia by its cough. Examination shows all the typical signs of this condition. Now that you have seen and examined cases of pleuro-pneumonia and apex pneumonia. I will conclude the hour by making a few remarks on pneumonia and its management.

Text-books give many varieties of pneumonia: practically we need divide pneumonias into but two divisions. (1) Acute lobar pneumonia is a disease peculiar to itself, and the (2) catarrhal or broncho-pneumonia, or capillary bronchitis, belong to the second group of pneumonias. Please make this distinction and keep it before you at all times, for it is of practical importance as regards treatment.

Acute lobar pneumonia is an inflammation of the lung produced by a specific micro-organism, the pneumococcus; whereas, broncho-pneumonia, or capillary bronchitis is due to other forms of cocci. The one is an acute specific disease, the other is usually secondary.

As regards localization, the acute lobar pneumonia may be found in the apex, in the inferior, lateral or central portions of the lung. Illustrations of its being localized in the apex are shown in the case presented to you this morning. Associated with this localization there is the peculiar cough or whoop which you have just heard. One may also have a wandering, migratory or creeping pneumonia, *i. e.*, a pneumonia in the right side to-day, and in a few days may find a typical pneumonia on the other side. The form of pneumonia that frequently puzzles us is the so-called central form. A case I saw recently was a boy about eight years of age, who had a high temperature, 106.5 for five days; there were present some of the clinical symptoms of pneumonia, but no râles or dullness; there was rapid breathing, high temperature, flushed face. All important organs were examined and found to be free, and we could not positively state that it was a pneumonia until the fifth day, when we were able to localize it. Such cases are not rare and may cause much trouble in diagnosis to the younger men of the profession; they may baffle even older practitioners. When such a pneumonia gets to the surface all the signs are then characteristic. In central and apex pneumonia high temperature is the rule in children and they will often be ushered in by convulsions.

Regarding the differential diagnosis, you have seen today how we differentiate between consolidation of the lung

*Held at the Post Graduate Hospital on Tuesday, March 28, 1899.

and effusion. The needle does that. Text-books give certain signs and symptoms for distinguishing, but the older we get the better we know that it is frequently impossible to differentiate between these two conditions without the needle.

You have occasionally to differentiate between a consolidated lung (an unresolved pneumonia), and a tuberculous consolidation. That is very difficult in children because they have no sputum and you cannot readily find the tubercle bacillus unless you get the sputum. One of the differential points pertains to the temperature. In unresolved pneumonia—after the ninth day—you do not have as high a temperature as you do in tubercular consolidation. There the temperature runs as high as 106 and above and remains high. In unresolved pneumonia it rarely gets above 103 or 104. This is not a positive method of making the diagnosis; we must keep in mind the clinical history, the course of the disease, the family history, etc., all of which aids us greatly in distinguishing between these two conditions.

As to the treatment of lobar pneumonia there is a lurking suspicion in the minds of some of our colleagues that we can abort pneumonia, but I do not believe that it can be done, although the course of the disease may be influenced. If the patient is a syphilitic, then mercury may have some influence; if the patient is infected with plasmodium malariæ then quinine may be of benefit, particularly in broncho-pneumonia. Lobar pneumonia is due to a specific micro-organism and we are waiting for the antitoxin, which our colleagues across the water say they have found.

Certain drugs have been advocated for the treatment of acute lobar pneumonia, such as the salicylates, viratrum viridis, antipyrin, antifebrin, phenacetin, digitalis, etc. These drugs may reduce the temperature for a few hours, or strengthen or weaken the heart's action; but the pneumonia will progress notwithstanding. Therefore I believe that the less drugs we use in acute lobar pneumonia in children, the better. If the temperature is not abnormally high, do not give anything but water. You may give hydrochloric acid to aid digestion. If cerebral symptoms develop and you fear convulsions, you may give phenacetin or antipyrin, the latter dissolved in water and given per rectum. To reduce the temperature mustard baths are useful. Also ice-coil to the head. If the heart becomes flabby, use stimulants early. Suppose a child's temperature drops on the ninth or tenth day, then goes again to 102 or 103; that means either an unresolved pneumonia or some complication has set in, as a serous effusion, or a purulent effusion (empyema).

In the beginning of acute lobar pneumonia give one dose of calomel, gra. iij to v and treat symptomatically. If retention of urine occur, use the catheter. A daily enema should be ordered and a few drops of salt water should be instilled into each nostril four times daily to keep nasopharynx moist. Administer liquid food, give cool drinks, cool air to breath, a warm mustard bath or cool wet pack to reduce the temperature and quiet the pain, or else bath at 100 reduced to 80, using friction. Do not give a cold bath if the feet are cold. If necessary grs. 3-5 phenacetin may be given at night. Weak children and infants require early stimulation, such as whiskey, wine, coffee and such drugs as are found below. There is no routine line of medication, although prescription No. 1 may be given, if it is found desirable to give something. Jackets, poultices and oxygen inhalations are of doubtful value, but a chest compress of cold water every hour or two, may be of value. If there be delayed resolution look for pus and gave iodide of potassium prescription, No. 7.

In broncho-pneumonia or capillary bronchitis we find the treatment is different from the one just considered. Broncho-pneumonia invades not one single lobe of the lung, but we find it scattered throughout the lung. It may be uniateral or bilateral, or again there may be small areas of pneumonic consolidations which, if you are expert enough, you may detect by physical examination. There are often atelectatic foci. In young children and in old people a broncho-pneumonia is a dangerous disease. Stimulate early and give expectorants. In malaria with broncho-pneumonia, quinine and whiskey is a good combination to give and I am often surprised at the good results obtained. In children and in adults, in broncho-pneumonia the treatment is active, not expectant. Prescription No. 7 is particularly adapted to this form and has the power of liquifying the secretions. Camphor by the mouth, administered with sugar or chocolate, or hypodermatically camphorated oil and ether, half and half, makes an excellent stimulant. The double salt of caffein and benzoate of sodium is a very good stimulant. The stimulants usually employed are Nos. 2, 3, 4, 5, 6, 8, In urgent cases artificial respiration and cold douches may be given. It is a good plan to isolate patients, for we often find one, two, or three pneumonia patients in one family; I believe pneumonia is mildly contagious. It is also a good plan to change the patient from one room into another. The air in the room should often be changed. Another point of value is the little trick of raising the foot of the bed; some patients are so weak that they are unable to expectorate or expel the mucus; by raising lower end of bed we can utilize gravity with good effect. This mechanical device allows the secretions to get out and so facilitates the clearing of the air passages and is well worth remembering. Artificial respiration may sometimes save life. Regarding the question of venesection I should like to say that I firmly believe in its value in adults and in selected cases.

FORMULÆ.

No. 1. ℞. Ess. of Pepsin ..... ʒ ij
Acid Muriat. dilut ..... 3 j
M. Sig. Teaspoonful four times a day.

No. 2. ℞. Ol. Camphor
Ether pur. āā 3 ii
M. Sig. Gtts. x-xxx hypodermically.

No. 3. ℞. Camphoræ ..... gr. j
Pulv. Digitalis ..... gr. j

No. 4. ℞. Acid Benzoic ..... gr. iij
Chololad ..... gr. v
M. Sig. One powder every three hours.

No. 5. ℞ Tab. Trit. of Strychnia, gr. 1-50 1-100

No. 6. ℞. Tab. Trit. Nitro-glycerine, gr. 1-100

No. 7. ℞. Antipyrin or Phenacetin with Caffein

No. 8. ℞. Pottassii iodidi ..... 3 ij
Aquæ ..... ʒ ij ½
Liq. Ammon ..... 3 j
Syrupi ..... ʒ ss
M. Sig. Teaspoonful four times a day.

No. 9. ℞. Caffein et Sodii Benzoat. gr. i-v, in water, by mouth or subcutaneously.

CLINICAL—GERMAN HOSPITAL. MALIGNANT GROWTH OF PYLORUS, PRESENTING DIFFICULTY IN DIAGNOSIS: DOUBLE PYOSALPINX: RADICAL CURE OF HERNIA: APPENDICEAL ABSCESS.

By John B. Deaver, M.D.

The patient now before us presents a condition which I am free to admit we cannot diagnose. She has a floating abdominal tumor and her physician and myself have thought of three possibilities: First: Growth in the omentum. Second: Pedunculated fibroid of the uterus. Third: Growth of the ascending or descending meso-colon. Since the patient is under ether I am inclined to think from examination the growth may involve the stomach, though there has been absolutely no stomach symptoms in the case. The patient has lost some weight and has changed in color, which inclines us to the view of malignancy of the growth.

An incision shows a malignant growth of the pylorus and involving the head of the pancreas, too extensive for any radical operation to be attempted. Gastro-enterostomy will not be done at present, as there is fortunately no obstruction as yet. If obstruction arises, that operation can be done. I rather think from the history of the growth and the begining cachexia of the woman that the case will fortunately prove one in which death comes from general exhaustion, before urgent symptoms of obstruction arise. The opening of the abdomen here, although not done for that purpose, may have some little influence in retarding the increase of the growth.

The case is an interesting one as showing the existence of such an extensive growth without any subjective symptoms. There is no history of the least stomach symptom. No investigation of the stomach contents was made in this case for evident reasons. Here let me say that I am not

opposed to scientific investigation of stomach contents, blood, etc., but I do say that the physician must depend greatly on other methods of examination in addition to these. The present tendency is to have diagnoses made by machinery instead of by the careful study of cases, as in former times. Use scientific methods, but at the same time depend on personal study and examination of cases.

DOUBLE PYOSALPINX.

This patient presents a history of obscure abdominal pain. Different diagnoses have been made, among them being appendicitis. We think the trouble pelvic and to be possibly a question between chronic tubal disease and non-ruptured extra uterine pregnancy. As to the question of pelvic hematoma from ruptured ectspic pregnancy, I do not think this point is to be considered, as when rupture occurs I believe the hemorrhage is into the peritoneal cavity instead of the folds of the broad ligament. Neither do I believe in the so-called interstitial variety of extra uterine pregnancy, as I think all cases are tubal. There is chronic tubal disease of some sort present in this case at least.

I make an incision well down to the pubic bone and, avoiding the line alba, go through the rectus muscle in order to secure stronger union of the wound. The patient is put in the Trendelenburg position and the intestines well packed off with gauze. I prefer this position more and more as I practice its use. Examination of the pelvis shows a double pyosalpinx. The left tube and ovary is removed without rupturing the pus sac. The right one is so adherent that it ruptures as I loosen it. The right ovary I leave *in situ*. The stumps I wash with a mixture of bichloride and carbolic acid.

The pelvis is then swabbed out with sterile gauze, and finally with iodoform gauze. The sigmoid flexure is washed and examined for possible injury and the wound will be closed after glass drainage is inserted, without irrigation of the pelvic cavity. Irrigation is indicated at times, and, if the abdominal cavity is thoroughly packed off, may be employed, but I prefer not to use it in this case. The wound is closed by through and through sutures. I think the reason for the poor results that occur after using these sutures is that the aponeurosis of the external oblique is not included in the suture. Its edges retract greatly, and, unless special care is taken, they may not be included. I find this to be the case in many of the old wounds I have occasion to reopen.

As to the after treatment of these patients, we practically do nothing in the majority of cases. An asafœtida suppository is inserted every three or four hours for a short time as a routine measure, but we hardly call that giving medicine. I prefer to give nothing by the mouth for the first twenty-four hours. If the patient needs stimulants, it is equivalent to saying that she was too weak for operation. This applies only to chronic cases, of course, as acute cases may have to be operated upon regardless of condition. If flatus does not pass, the asafœtida suppositories and the application of two or more ice bags give the best results in our experience. As regards the so-called intestinal antiseptics, I place no faith in them at all.

We administer oxygen to every patient in this hospital after the anæsthetic is stopped. This is to lessen the liability to vomiting, and also to bring about consciousness of the patient as soon as possible. This is a costly routine practice, but it is on the principle that the best method is should be used. As to using oxygen with the anæsthetic, I cannot speak from experience, as I do not employ it in that way.

I maintain that the surgeon holds really the third place in regard to the welfare of his patients as concerning the results of an operation. First is the anæsthetizer, and, second, is the nurse. So much depends on the latter that if I were to have an operation done I should choose a first class nurse and only a fair surgeon instead of a better surgeon and an inferior nurse afterward.

HERNIA.

The third case is one for the radical cure of hernia in a young man. An interesting point is that it is a left sided inguinal hernia. I do not believe in operating for hernia in all cases. Where a truss will control the descent, or where a person's occupation is such as not to predispose to strangulation, I advise against operation. Where a truss gives trouble, or the patient is a laborer, operation is indicated in the latter, where in other walks of life it would not be. This case is taken at the request of the patient, who fuly understands both sides of the question.

On opening the sac we find an omental hernia, the omentum being adherent to the bottom of the sac. After emptying the sac it is folded or pouched by means of a suture and returned to the abdominal cavity to act as a plug to the internal ring. The opposition of the abdominal parietes is made with kangaroo tendon sutures. The cord is left simply beneath the skin and fascia instead of under the aponeurosis of the external oblique, as in Bassini's operation.

APPENDICULAR ABSCESS.

Our last patient is a man who, two months ago, was taken with a pain in the back on the right side. The pain came and went for a time, and finally became worse. Vomiting and constipation followed. At times there was pain and tenderness in the right iliac fossa. Now a mass in that region can be palpated and there is some tenderness.

This leads me to say that it is the exception rather than the rule for pain in these cases to appear first in the region of the appendix. It may be wherever there is direct nerve connection with the nerves supplying this region. In the majority of instances it will be at the navel or pit of the stomach. In my experience the vomiting lasts only twenty-four hours in the majority of favorable cases.

An incision through the abdominal wall in this case opens the abscess. The cavity is irrigated and cleaned with sterile and iodoform gauze. A second incision is then made, parallel with the first, and a short distance internal to it. Through this the intestines are packed off and the appendix is then removed through the first incision.

CORRESPONDENCE.

DR. TERRY'S APPENDICITIS LETTER.

To the Editors of THE MEDICAL TIMES:

Dr. Terry's letter in the April number of THE MEDICAL TIMES escaped my attention until reference was made to it in the letter in the May number, but the points in both contributions can be discussed *seriatim*. Dr. Terry refers to the answers from ten consecutive patients of mine, who stated that they preferred surgical to medical treatment for appendicitis, and he expresses the opinion that the testimony of other surgeons on that point would show "some discrepancies of opinion and statistics." There is no doubt about it. I have to fight the surgeons harder than the physicians, and if anyone thinks that I gain any popularity by insisting upon what right he has not made many inquiries among my colleagues. Some of the surgeons who stand very high in the profession, and deservedly so, have such outrageous methods of treatment in appendicitis work that they terrify patients and repel physicians who are inclined to do what is right, and if Dr. Terry will look over my papers that are recorded in the *Index Medicus* he will find that few of them comparatively are aimed at the physician. He thinks that an interesting report could be made up from the bureaus of vital statistics in large cities, as showing the difference between the medical and surgical treatment of appendicitis. I have looked up this matter myself. There is at present no testimony of consequence to be had from the bureaus of vital statistics on that point, for the reason that so many deaths from appendicitis are in cases not diagnosticated. One of the coroner's physicians in New York told me that he was constantly making post-mortem examinations in undiagnosticated apendicitis cases, and that he had made two or three such examinations in a single day.

Dr. Terry wishes to know if it has really been determined from the statistics of many hundreds of operations that the death rate can be lowered to less than 1 per cent. in the class of cases in which infection is limited practically to the appendix. I can give him the names of several operators who have not lost a single case of this class, and whose case will aggregate between 800 and 1,000. I have not had a death in more than 150 of this class myself.

Dr. Terry admits that "it will not be surprising if he has some deaths when mistaken judgment in given cases may lead him to delay when operations should be performed; but just as logically operations are performed when they ought not to be." Indeed! what are his grounds for judgment? None of the rest of us have any such grounds.

because the nature of appendicitis allows only of guesswork, not judgment. I lost two good friends this winter forty-eight hours apart, because in the "judgment" of their physicians their appendicitis was of a mild type, not requiring operation. If we call Dr. Morris, they said, he will be sure to operate. Now my two friends are dead. Would they be dead if a man who was sure to operate had been called? Not if his methods were correct. One of them I think would still be practising his profession and supporting a lovely wife and three little children. The other one, I think, would still be conducting a large brokerage business and maintaining a keystone position in several corporations. Both are now dead, as the result of exercise of guesswork.

Dr. Terry reports upon the ten cases that I asked for, and upon ten new cases. It would have been much better if he had reported upon ten more of the old cases in the famous list of "forty-nine cured by medical treatment." In the ten cases that I asked for he gives us none of the essential details that would show that his diagnosis was correct; not a single word about palpation findings. One of his cases came to my office after six weeks of oil treatment at Utica, because "the lump" still remained in the appendix region. The lump was a loose kidney, which was easily replaced. Palpation sufficient to establish the diagnosis of appendicitis would have determined that this case was one of loose kidney, and if Dr. Terry depends upon the testimony of subjective symptoms rather than objective signs I am sure that many of the cured cases of appendicitis were really cases of colitis, or of other troubles readily cured by the good oil treatment. I note that one of the cured patients has to be "very careful about what he eats." Another "strained himself and took cold" and had a relapse. Another one "in three months considered himself cured." Now, this is what I call juggling with concretions, and mucous inclusions and tuberculosis, and the real things that we know are to be found in the appendices of Dr. Terry's cured patients. To be sure, I would rather depend upon Dr. Terry's oil treatment than upon the surgery of some famous surgeons, but neither one is right. The right way is accessible. Dr. Terry quotes the histories of ten patients subsequent to operation, and shows unfavorable symptoms in almost all of them. I recognize these symptoms as clearly due to peritoneal adhesions. That means that operation was either not done at the right time, or it was not done by proper methods. I do not propose to defend improper surgery in appendicitis. Surgery that is improper as to time or methods gives results that are not much superior to medical treatment in appendicitis. And a vast amount of disreputable surgery is being done. It is about in proportion, I presume, to the bad legal work that is being done, and to the bad literary work that is being done, and to the bad engineering work that is being done. It is a hard fight to maintain what is right, and there is little credit in it for the ones who have to lift the dead weight of wrong in addition to advancing the right. We know the causes for death and suffering in appendicitis. We know how to prevent death and how to avoid suffering in appendicitis. Do the majority of the people avail themselves of the opportunities that are available? Oh, no! Not yet. Human nature has too great a liking for false prophets. Anyone who pleases may know what is right in appendicitis treatment.

ROBERT T. MORRIS, M. D.

A NEW WAY TO MAKE FLUID EXTRACTS.

To the Editors of THE MEDICAL TIMES:

I notice on page 149, May, 1899, issue, under the head of "Boric Acid," some very interesting remarks on boric acid as a preservative of meats, etc.

Also I note some effort to get rid of alcohol as a preservative of fluid extracts and tinctures by placing acetic acid as the menstruum. Thought it would not be out of place in conjunction with above to relate an experience of my own.

About five years ago I wanted some fluid extract of mistletoe (phoradendon), so I put a quantity, about a peck, of the leaves and small stems into a porcelain lined vessel, and this into a large pot over a fire, and kept about one and a half gallons of water on the leaves until they were soft, then put the mass into a sack and squeezed the juice out and evaporated it down to about one quart. Half of this I put into a pint bottle and added a teaspoonful of each of boric acid and carbolic acid.

To-day I was looking at the bottle, which is two-thirds full, and poured a drachm into a tumbler and added a drachm of water. Result, no separation, and after standing an hour or more no sediment, the mixture remaining clear and a bright brown color. The strength, also, after six years is as good as when freshly made, as I tested it only a few days ago in a case of obstetrics, commencing with it because the pains were lagging several hours before delivery, and giving it in drachm doses every half hour till the contractions became regular, then adding quinine to steady and enforce them.

I draw the attention of those who may wish a fluid extract or a strong tincture that will not separate by adding water, also the form of it is safe, and the small portion of the carbolic acid has a pleasant effect on the stomach.

BEN. H. BRODNAX.

Brodnax, La., May 23, 1899.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine, New York, Etc.

Morphine in Cardiac Disease.—Toogood has administered the drug chiefly in the distressing cases of heart-disease in which digitalis, strophanthus and convallaria were without beneficial effect upon the heart, and acted as irritants upon the stomach. In cases in which there was extreme irritability and irregularity in rhythm and in pulse-volume, with extreme dyspnœa and sleeplessness, and with the urine scanty in amount and albuminous, a hypodermic injection of one-fourth grain of morphine or from 10 to 15 minims of the liquor morphine, had the most gratifying effect, causing the pulse to become strong and regular, the œdema and dysnœa to disappear, the urine to become normal in amount and character, the albumin to become decidedly lessened or to disappear. No accident occurred in a large number of cases. The beneficial effects are attributed to the action of the morphine upon the nervous apparatus of the cardio-vascular system, both central and local, bringing rest to the overstrained organ and allowing it a chance of developing recuperative power.

The Sheet Rub.—H. T. Patrick *(Chicago Med. Recorder,* February, 1899) recommends the sheet rub in functional nervous diseases. The success of this mode of treatment depends upon its being done correctly. The rub is given at the bedside. Two sheets are used, and these must be placed in such a manner as to admit of instant handling—either over the end of a chair or the foot of the bed. One sheet is dipped in cold salt water. The patient is taken from the bed and the cold sheet instantly thrown around him. After briskly and vigorously rubbing him through this sheet, it is dropped to the floor, and he is quickly rubbed through the dry one. He then gets into bed, covers himself well, and puts out his feet to be dried and slapped to promote circulation. Properly done, this rub should not occupy over a minute and a quarter.

Dr. Patrick gives the first rub himself, and the second is given in his presence, that his instructions may be fully understood. He finds that it quickens circulation, assists the patient to gain in weight, helps in keeping extremities warm, and aids digestion. He thinks that certain elements in the treatment are particularly beneficial in nervous diseases. It produces profound mental impression, exceeding that of any other mode. There is sudden shock, quick reaction, and the feeling of comfort and warmth following impresses the patient with the fact that he is getting well.

The author has never failed to obtain reaction, even in patients who had to be held up while taking the rub.

To Abort a Cold.—Max Nassauer recommends for this purpose a weak solution of potassium permanganate. It checks cold in the first hour or so. A few drops of a strong solution of the salt—about what can be taken up on the tip of a penknife to half a litre of water—are added to warm water until it is colored a pale pink. After blowing the nose vigorously, both nostrils are well rinsed out with this weak solution, the fluid being allowed to run out through the other nostril and through the mouth. Each nostril is then wiped out with cotton on the finger. A

small dry plug of cotton is then pushed well up into each nostril and the nostrils filled with the weak solution, which the cotton is allowed to soak up, while the head is held back. The plug is left undisturbed for about an hour, when it can be expelled by blowing the nose. Even an established cold is favorably influenced by this treatment, but it is most effective when the sneezing, tickling and increased secretion announce the onset of the cold.

Ice in Anal Prolapsus.—Hajech has been very successful in reducing and curing the tendency to anal prolapsus in children by introducing after defecation a cone-shaped piece of ice 7 to 8 cm. long, with a base 2 to 3 cm. in diameter. It is placed in the center of a piece of iodoform gauze. No bandage is required.

Mistle Thrush Swallowing Droppings of Young.—An extraordinary account was given in the March number of the English publication, *Knowledge*, respecting a peculiar method of home-sanitation adopted by a bird known as the mistle thrush *(turdus viscivorus)*. It has since been fully verified from his own observation by another correspondent of the same journal, who describes the proceeding as follows: "The parent bird came to the edge of the nest, fed the two young ones, waited a moment, then one of the two nestlings raised the hinder part of the body toward the parent, who stood above it, and, leaning over it. When the dropping was extruded the parent bird seized it *in situ*, and promptly swallowed it. That the drooping was large may be inferred from the fact that the birds were just leaving the nest. The young birds were too well feathered to require covering, and the parent bird flew away almost at once, but there was no possibility of mistaking that the foex was really swallowed down, nor did I see any sign of disgorging. While two birds were in the nest a dropping was swallowed at every visit. When only one was left I saw the parent bird leave the nest on two occasions without one, but that, of course, is easily accounted for. Every time I saw a dropping taken it was swallowed; not the largest even was taken in the beak only and dropped away from the nest."

Fictitious Mineral Springs.—It is said (*J. A. M. A.*) that once during the progress of some extensive engineering and building works in the State of New York a sulphur spring of great medicinal virtue was discovered, and was enclosed in a marble basin and exploited throughout the community. When the operations were complete and the army of workmen left, the spring lost its special qualities, and on investigation it was found that they were solely due to the sewage contamination from the workers' camp. A somewhat parallel case to this is reported from a city in Iowa, where the board of health ordered the filling up of a filthy well, the owner of which was bottling the water and selling it as mineral water. He had procured scores of testimonials as to the benefits received from those who have used it, and threatens to prosecute the board for damages. The guardianship of the public health is sometimes a thankless task.

The Common Nettle in Anæmia.—Dr. Mjalman Agnér (*Bull. Gen. de Therap.*, June 8, 1898, *Am. Med. & Surg. Bull.*, October 25) calls attention to a remedy for anæmia which is exceedingly popular in Sweden—*i. e.*, nettle. He himself was cured of anæmia when he was seventeen by taking nettle soup. One of his patients, a girl of twenty, had tried all remedies recommended in anæmia, including the preparations of iron, but without apparent benefit. He ordered her then nettle soup, first every second day; then, when she improved, twice a week. The patient was completely cured. The author treated many other cases with nettle, but as they received other treatment besides he does not care to speak of them in detail. The common or stinging nettle *(urtica dioica)* and the dwarf nettle (*urtica urens)* possess the same virtues, but the first is used almost exclusively. The best time for collection is the spring; the best parts to use are the roots and stalks with only half-developed leaves. It may be used as an infusion—a handful to two quarts of water, two or three glasses thereof to be taken during the day, but it is much pleasanter to use in the form of a freshly prepared soup from the fresh herb.

Thymol in Whooping Cough.—Fischer has treated five of his own children with thymol extract prepared by Taschner in Berlin, and called by him "pertussin," says *The British Medical Journal*. The mixture is sold in bottles, and has a brownish color, aromatic smell, and is of a syrupy consistence. Taschner's formula is: Thymol, one part; syrup, seven parts. Children take it well in doses from a half to one tablespoonful three times a day. The effect of the medicine was quite remarkable in these cases; the distressing cough was soon relieved and the attacks of cyanosis speedily diminished. The author tried giving the extract in other conditions, such as chronic catarrh of the larynx and bronchi, and emphysema. These cases were greatly relieved by pertussin.

Potassium Permanganate in Lupus.—Kaczanowski has cured thirty-four cases by dusting the surface with two to five milligrams of potassium permanganate, after removing the crusts with vaselin and warm soapy water (*Sem. Med.*, Oct. 19, 1898). One application proves sufficient; the scab falls in fifteen days and the patch heals. A nitrate of silver salve hastens the cicatrization. The application of the permanganate is painful but bearable and no worse than other caustic remedies.

Xeroform in Army Surgery. (By Dr. Emilio P. Nogueira, Surgeon-in-Chief of the Spanish Army Sanitary Corps, Chief of the Surgical Clinic at the Army Hospital at Jiminez, Cuba. Abstracted from *Revista de Medicina y Cirurgia Práticas*, Madrid, April 25, 1899.)—My observations entitle me to draw the following conclusions: 1. Xeroform is a powerful antiseptic for wounds, and is capable of being of the very greatest service in military surgery. 2. It absorbs the secretions from the bleeding surfaces, sterilizes them, and renders the wounds absolutely dry and free from the germs that are capable of causing secondary infections. 3. Since the very simple dry Xeroform treatment above detailed maintains wounds aseptic for 48 hours and longer, it is absolutely irreplaceable for first treatment on the battle field and during the accumulation of patients in emergencies in hospitals deficiently supplied with personnel, for it permits postponement of the treatment without any danger to the patient. 4. In wounds accompanied by loss of tissue it favors cicatrization by the small, firm and regular granulations that it promotes, and it never causes the appearance of the soft, spongy granulations that so often follow the employment of other antiseptics, more especially iodoform.

Creosote in Chronic Constipation.—According to *Popular Science*, Prof. Vladimiro de Holstin finds in creosote an excellent means of combating chronic constipation without exercising any purgative action properly so called. The creosote should not be prescribed in pills, capsules, or alcoholic solutions, but pure and in drops; the effective dose is about seven or eight drops taken twice daily, immediately after breakfast and after dinner, in a glass of milk, beer, wine and water, or pure water. To begin with one drop of creosote is administered, and that amount increased by one drop daily until the desired effect is obtained. This treatment has to be continued for some time, some months in fact, and not only overcomes the chronic constipation, but at the same time restores the appetite and braces up the system. Under its influence the stools become regular, bland and copious, and free from pain or any sign of intestinal irritation.

RETROSPECTIVE DIETETICS.

The Food Value of Alcohol.—The following conclusions concerning the "Influence of Alcohol on Human Metabolism" were arrived at by a series of decisive experiments by Rosemann. *Zeitschrift Fuer Diaetet und Physikal. Ther.*, Vol. 1, No. 2. *International Medical Magazine.*

It appears that alcohol does not possess the power of sparing the albuminous materials. On the contrary, it produces a slight increase in albumen destruction. The addition of 4500 cc. of alcohol to the food taken produced no effect whatever on the nitrogenous elimination. The addition of an equivalent number of calories of carbohydrates or fat would unquestionably have had the effect of lessening the nitrogenous output. Alcohol is, therefore, incapable of completely replacing carbohydrates and fats; it has not the power of sparing the albumen in the body.

If it is admitted, on the one hand, that alcohol does not increase oxygen consumption and carbonic acid produc-

tion, and, therefore, protects other substances in the body from decomposition, and if it is conceded, on the other hand, that the substance so spared is not albumen, there is but one conclusion possible, namely, that alcohol by its combustion prevents the decomposition of non-nitrogenous substances; it is an economizer of fat. This conclusion agrees very well with the results of practical experience. Theoretically, however, this behavior on the part of alcohol is rather difficult to explain. The final decision of this question must await further investigation.

The practical significance of these results for the economic value of alcohol is considerable. Henceforth, it will have to be viewed in the light of a luxury, for it is valuable only inasmuch as it stores up fat, a not altogether desirable property. But the greatest significance of this inability of alcohol to replace albumen is in connection with dietetic treatment of disease. Its stimulant and antipyretic properties are of course unaffected by the results of the experiments, but not so its value as a food stuff, since our principal object in giving it for that purpose is to check the consumption of albumen in the body. It would indeed be a bold thing to assert that alcohol, which admittedly does not possess the power of replacing albumen in health, develops that power when the organism is weakened by fever and disease. It is much more likely that alcohol under such circumstances has the very opposite effect and rather increases the destruction of albumen, as the very conditions which favor its toxic action on protoplasm—impaired nutrition and inanition—are present in disease.

Concerning Eggs.—To the average farmer an egg is an egg. All he cares for is to be able to get rid of the stock on hand, whether for cash or barter, at the highest possible price. To enable him to obtain a good price he often holds his eggs for a considerable time, in order to take advantage of the increase of price.

Eggs which the "good old honest farmer" knows to be quite stale, and eggs from nests which the setting hen has deserted, are judiciously "scattered" among the eggs he considers fresh. Indeed, almost any egg is fresh enough to sell if not obviously rotten. Such miserable specimens are continually being sent out from our grocers "by mistake." At breakfast it not uncommonly happens that some one will open a rotten egg, and the result is quite enough to turn the stomach of the strongest. The odor of a bad egg is due to the presence of sulphuretted hydrogen, and is one of the most nauseating and disgusting of all bad smells.

Even in families where eggs are frequently provided, comparatively few people know how to cook or to serve them. The dirty shell and the half cold egg which has been boiled a minute or two, if at all, is the disappointing food we usually secure when we call for eggs. Americans who have lived for some time in Europe readily acquire a taste for eggs, and in the homes of the wealthy almost every breakfast table is supplied with this wholesome strength-giving food.

Physicians who are aware of their great nutritive value, when fresh and wholesome, prescribe them; but beyond the mere mention of "eggs" for the patient, do not state how they are to be cooked or served.

The "delicious" omelette is as seldom seen on the table of the average American as the useful hot water receptacle for the soft boiled eggs which old-fashioned Bostonians made use of and which is now almost obsolete. Comparatively few are aware what enormous quantities of eggs are imported into this country every week in the year for our market supply. This supply is brought from Europe in ocean steamers and from the British provinces—Cape Breton, Nova Scotia, New Brunswick and the Canadas. The domestic supply is not much better than the foreign, and good fresh eggs are more difficult to obtain than even fresh milk or butter. Nor is this only true of hotels and restaurants, but with care in marketing the supplies of eggs for our better class of private families is below par. Physicians find it difficult to induce patients to eat eggs, so disgusted have the majority of people become with their experience in searching for wholesome specimens. Where private families have henneries of healthy fowls, well housed and well fed, delicious fresh eggs are a possibility, provided personal attention is given to the matter. The average hen-coop is in some repulsive, damp and sunless location, too filthy to visit, save for the shortest possible time needed to search for the eggs. The water supplied is apt to be foul and stale, and the food flung upon the filthy ground. The hens look dirty, anæmic, and generally unhealthy, and the less known about their food supply the better. Is it reasonable to expect wholesome food from such unfit creatures? But when the eggs of such fowls are stale that occasional fatal poisoning among human beings results from eating them cannot be wondered at. It is said that the well-to-do Chinese delight in eggs which have been "preserved" for a dozen years, and which in the process are supposed to acquire a "bouquet" unequalled, unless by the preserved eggs of our New England farmers who, having recipes for "pickling" eggs, "put down" large quantities when they are cheap, and sell again when they are dear, about Thanksgiving time and Christmastide. Healthy fowls, like those known as Lt. Bramas, Buff Cochins, Plymouth Rocks and other varieties, housed in clean, dry buildings, with abundance of sunlight, pure water, pure air, and clean food, and with reasonable exercise, afford fresh, wholesome eggs worth eating, and such eggs are what physicians mean when they prescribe eggs for patients.

The guinea hen lays a delicious egg, which is useful to some patients. As goat's milk is more digestible than common cow's milk, so it is said that the egg of the guinea hen is peculiarly suitable for children suffering from wasting diseases. Hard boiled eggs and raw eggs are not to be recommended, in spite of much of prejudice in their favor. Eggs should be boiled three minutes, and served hot, with butter, salt and pepper for seasoning, and with warm toast. This is almost always the best method.

Dr. Cameron has reported in the *Dublin Medical Journal* (October, 1895) a remarkable occurrence of vomiting and purging in seventy-four nuns and girl pupils in the boarding school attached to a convent in Limerick, Ireland. The poisoning was undoubtedly due to the use of stale eggs. The vomit and the stools were intensely green from the presence of bilious matter, but careful analysis failed to disclose the presence of ordinary poison. The viscera of two patients that had succumbed also were examined, but no poison could be detected. Ptomaines were found present. The custard, given to some pigs, induced severe diarrhœa. Other cases of poisoning from stale eggs have been reported, but many instances which have come to the notice of physicians have not been reported, and it is beyond doubt that fatal cases of poisoning have not been attributed to the poisonous eggs which were the cause.

Professor Forlanim, of Turin (*Sem. Med.*) Nov. 2, 1898, quoted by *Jour. American Med. Assoc.*, Jan. 21, 1899), states that in anæmic and altrepic infants subcutaneous injections of fresh yolk of eggs, mixed with one-third its weight of physiologic salt solution, filtered through absorbent gauze and injected into the buttock, caused an increase in weight, number of red corpuscles and amount of hemoglobin, much more rapid than with other injections. Commencing with 1 cc., the dose is increased to a maximum of 10 cc., averaging twenty injections, with light local massage after each. The use of eggs by rectal injection for alimentation is increasing, and physicians are more frequently recommending them for food—at least twice every day—for some patients. The increased demand must result in more care in obtaining supplies. The whole question of impure and injurious foods is attracting the attention of our law makers, but certainly none too soon.

A Case of Puerperal Fever Treated with Unguentum Credo.—In the *Deutsche Medicinische Wochenschrift* of March 9, 1899, Dr Peters, of Eystrup, Hanover, records a case in which the ointment was employed with excellent effect. The patient was a VII. para, thirty-three years old. During the confinement a manual separation of the incarcerated placenta had to be undertaken, occasioning great hemorrhage and a very dangerous collapse, lasting for several hours. Thirty-six hours thereafter there was a temperature of 40.5 degrees C. (104.0 F.), with violent headache and anorexia. There were no local symptoms. On the next day her symptoms were the same, and her fever continued. * * * The patient has now entirely recovered. It is worthy of remark that the prognosis was rendered worse by the acute anæmia and chronic bronchial catarrh from which the patient suffered, and by the bad nutrition of the patient, who lived in very poor surroundings.

MISCELLANY.

—In puerpeal fever salicin has a much more prompt effect than quinine.

—Ebstein, after a long trial, deprecates the use of thyroid extract in obesity.

—Suppositories of ichtol, 5 to 10 grains, are recommended in prostatis; they are used morning and night.

—Aguinaldo was at one time a medical student in the University of Manila, and later at the Victoria College at Hong Kong.

—Dr. Hermamie used orexine, 4 grains, three times a day, in nine cases of vomiting of pregnancy with entire success in every case.

—Dr. J. Mount Bleyer asserts that violet rays of light, applied to the human system by means of electricity, is an absolute cure for consumption.

—Professor Frederick Karl Christian Ludwig Buechner, the author of "Force and Matter," died at Darmstadt on May 1. He was born March 29, 1824.

—Peterson recommends for favus softening the crust with a 1 per cent. carbolated vaseline ointment; wash with soap and water and paint with iodine.

—The Hospital Sunday Association has appropriated about $70,000 to the various hospitals, based on the number of free bed treatments in each hospital.

—An appropriation of 60,000 marks has been made towards the expense of a scientific expedition to the tropics, under the leadership of Koch, to study malaria.

—Hebra's formula for diachylor ointment is considered the best. It is composed of 15 ounces of olive oil, 3½ ounces of lead oxide and 2 drachms of oil of lavender.

—There have been the past year 250,000 deaths in India from the bubonic plague. The disease is now subsiding, but yet the deaths in the Bombay Presidency amount to 1,000 weekly.

—Uricedin, now so extensively used in uric acid conditions, is composed of sodium sulphate, chloride, and citrate acetate, tartarate pomate and pectorate, with a small quantity of limonin.

—The military bands in France visit the military hospitals once or twice a week to play to the inmates, and it is now proposed to extend this practice to include the general hospitals in garrison towns.

—Phelps says, in the *N. Y. Medical Journal*, that from personal observation he can state positively that alcohol is an absolutely safe and sure specific against the escharotic action of pure carbolic acid.

—The First International Congress of Doctors connected with life insurance will be held at Brussels, September 25-30, 1899. There will be representatives from all over Europe and the United States.

—A Chicago man has invented a guard which can be carried in the pocket and slipped on any drinking glass, thus affording protection from infection when traveling or whenever a public drinking utensil is used.

—Sprains, Dr. Chas. O. Files states (*N. Y. Med. Jour.*), are more successfully treated by electrical massage with the static roller than by all other means combined, the patients getting well in one-half the time hitherto required.

—There is a movement on foot in Russia to establish sanatoria for consumptives in the numerous monasteries, the majority of which are situated in healthy regions, have spacious rooms and are able to supply fresh milk, eggs, etc.

—On the theory that plenty of exercise, by walking, is good for consumptives, the trustees of the Cincinnati City Hospital have had constructed a board walk a mile long within the hospital grounds as a promenade for consumptive patients.

—Dr. Djemil Pasha recently made a laparotomy on the sister of the Turkish sultan for stenosis of the pylorus, and the success of the operation is proving quite a force in breaking down the barriers against the treatment of Musselman women by physicians.

—A writer in the *Toledo Medical and Surgical Reporter* recommends for acute and chronic gonorrhœa a capsule three times a day composed of 2 grains methyline-blue; 3 of oil of sandalwood; 3 of essence of copaiba, and 1 drop of oil of cinnamon. In three or four hours the water is colored a brilliant blue.

—Lewis Schooler (*West. Med. Rev.*) shows that the late war was, in its surgical and military aspects, one of the most successful ever conducted, contrary to the common hysteric notions now current. This is especially the case as regards the wounds received. The freedom from septic infection was remarkable.

—"One zealous Christian scientist can undo the work of many efficient health police provided he has the liberty to carry out his religious medical vagaries to their logical result," says the *Journal of the A. M. A.* Why not the adjective "medic" as well as the adjective "logic," Mr. Editor? It is what we are coming to, seemingly.

—In examining the throat of a woman who had applied for laryngologic treatment, according to *Archiv. f. Laryng.*, E. Berthold noticed that the vocal cords had the appearance found only in the male adult. Further investigation disclosed that the individual was a hermaphrodite, who eight years later returned for a certificate to allow the change of sex, having fallen in love with a woman.

—By the will of the late Benjamin F. Horwitz Baltimore, a son in-law of Prof. S. D. Gross, $5,000 is left to the Johns Hopkin Hospital, to provide a medal for bestowal on such member of the medical profession either in this country or abroad as shall have accomplished most in each year to ameliorate the sufferings of mankind. The medal will be known as the Dr. Eugene Horwitz medal, in honor of the son of the testator, who was connected with the hospital and died about five years ago.

—Prof. Patrick, of Chicago, after a series of observations and comparative experiments relating to the confusion between tastes and odors, suggests in a recent paper that a great economy in household expenses might be accomplished by merely blindfolding the family before sitting down to table. If the influence of smell were removed by some contrivance at the same time, most of the savory dishes and drinks now so popular could be replaced by the simplest and cheapest materials.

—A young man who had never taken mercury in any form recently died of hydrargyrosis in a Vienna hospital, caused by the presence in the same ward of several patients undergoing Wielander's "pillow-slip" mercurial treatment. He was in an advanced state of tuberculosis, with ulcerations in the mouth, anæmic and cachectic, and although removed to another ward at the first indications of disturbance, sufficient mercury was found in the urine to account for the fatal result in his enfeebled condition.

—An Ohio correspondent of the *N. Y. Medical Journal* reports having been hurriedly called to see a young girl who had bestowed her favors upon two lovers, of whom she was equally enamored. The result was a nine-pound boy, normal in every way except that he possessed two distinct and well-developed penes. This phenomenon is now twelve years old, and the doctor has ascertained that one penis is used solely for urination, while the other is alone capable of erection. The query in the doctor's mind is: If the girl had had three lovers would the offspring have been endowed with three penes instead of two, and what would have been the function of the third?

—The following anecdote is commended to the consideration of Prof. Schenck and his enthusiastic followers: A clergyman, walking on the outskirts of his parish one day, found one of his parishioners whitewashing his cottage. Pleased at this novel manifestation of the virtue that is next to godliness, he complimented the man on his desire for neatness. With a mysterious air the worker descended from the ladder, and approaching the fence, said: "That's not exactly the reason why I'm a doin' of this 'ere job, your worship. The last two couples as lived 'ere 'ad twins, so I says to my missus: 'I'll take and whitewash the place so as there mayn't be no infection.' You see, sir, as how we've got ten of 'em already."

ORIGINAL ARTICLES.

"CLIMATE-CURE" IN THE TREATMENT OF INCIPIENT PHTHISIS.

By H. R. Taylor, M. D., Philadelphia, Pa.

THE tuberculin which was introduced by Professor Koch is certainly of use in tuberculosis for diagnostic purposes, although as a remedy for the cure of the condition it has not proved itself to be of value. But we do not feel that this powerful therapeutic agent should be introduced into the human economy simply for diagnostic purposes, so the use of tuberculin is practically confined to veterinary surgeons. When it is used upon a human being the dose hypodermically is one milligram; the reaction is perfectly characteristic and the general belief is that it is perfectly reliable, but as a therapeutic agent it is now generally eschewed.

In taking up the treatment of incipient phthisis, the statement is probably true that there is no form of disease in which it is more necessary that the process should be seen in its incipiency. It is undoubtedly sound practice in these cases to send them away from home to a region which has the altitude of about 5,000 feet, possessing a climate that from experience seems to be in itself antagonistic to the disease.

I will endeavor to take up and discuss the many things which must enter into this question of sending sick people away from home, which will make the prospective change a benefit or a curse to the sick one.

As a rule, many physicians through thoughtlessness order patients away with nothing in their mind but the consideration of the disease, considerations of the individual being simply left out. The order is given to "go to Asheville," "Colorado," "California," "Florida," or "Texas;" the temperament, taste and finances of the patient are scarcely ever considered; home sickness is not appreciated, and the personal equation of the patient scarcely ever enters the question. The idea seems to grasp the mind of many attending physicians that these patients must get away, whether they wish to go or not, and that it makes very little difference where they are sent.

We are just beginnjng to learn the wonderful resources of our own country in the way of climate for various diseases and as a prophylactic in inherited conditions, but unfortunately we cannot yet prescribe our climate as we can our calomel. No one appreciated the truth of this statement more fully than Dr. J. M. Keating, who stated that all climate is an unstable affair, far from ideal and valueless in itself. With it must come comfort, good food and contentment. In other words, it is the establishment and maintenance of nutrition that is desired. If this be true for a man, how much more so is it for a woman? The former, if he be well enough, can find amusement and occupation outdoors, but the latter has always to lean more or less on home life; her contentment must be derived from her social surroundings. And yet how rarely is this considered.

Physicians should study geography; and those who are sending patients away by the hundred for climatic treatment should make it a point, if possible, to visit these localities during the season of the year in which the resorts are considered especially valuable, and they should not be satisfied with a few days' sojourn at a five dollar a day hotel. If their patients are to be benefited at all by climate, a residence of months will be required, and that means boarding houses or housekeeping; the average boarding house at an expensive resort, away from the supplies of a generous market, will nullify the effects of the finest climate.

It is necessary to study each case from the standpoint of the individual as well as from the standpoint of the disease, and select the future place from actual knowledge, either derived from personal experience after a thorough investigation, or from that of others who know. When the location is decided upon, it is the best plan to write to a prominent physician of the place, giving him a history of the case, the diagnosis, the stage of the affection, the patient's temperament, his or her financial condition, and be advised by the local physician as to the probabilities of success at his resort. Let him secure the necessary accommodations, take entire charge of the patient on his or her arrival; be sure that there is impressed upon the sick one the necessity of following out the instructions of the local doctor, who, from a large experience, should be conversant with all the features of such cases, and who should not be hampered with conflicting instructions from the home physician. Then the possibilities of cure are increased to the maximum.

When such a patient goes to one of these places he should lead as far as possible an out door life, being exposed to the air and sunshine as nearly as possible all the time. It is claimed by some good authority that tubercular patients going to such an altitude as 5,000 feet and there becoming practically "cured," cannot return to a lower altitude without again being subject to further attacks of tuberculosis. This is due to the fact that the agencies which produce the disease in the first place are again placed in favorable condition for action. When you consider that patients who now "go west" can obtain there all the conveniences and luxuries which we have in the East, and also that there are vast unlimited business opportunities, this objection that the patient cannot safely return to his original home fades into insignificance.

The physician traveling in California and throughout the Western States will be surprised to find how many men have gone west on account of pulmonary tuberculosis, who, after a residence of a few years, have become healthy, robust business men. Looking at these active, healthy men, the physician can scarcely think it possible that they had ever been victims of tuberculosis.

Now as to the problem of the method by which climate acts in curing phthisis: Phthisis is the direct result of the growth of the tubercle bacilli in the lungs. The question naturally arises how climate can in any way affect the growth of these organisms after they have once found a nidus in the system. This question cannot be answered with positiveness. One matter bearing upon it is, however, nearly certain. It would seem probable that

the only reason that all of us do not take the disease is that either from the good condition of the general health or from some peculiar, unsuitable state of the respiratory tract, the bacilli, which we all probably inhale at times, do not find in certain individuals the conditions suited for their development. Given, then, a patient with pulmonary phthisis, our efforts must be to render the lungs again of such a quality that bacilli already present can no longer thrive and multiply. It seems beyond question that certain climates have the power of accomplishing this desideratum in some way unknown to us, but certainly more effectively than any other known agent. What peculiar climatic features they are which have this power is, as yet, not determined with definiteness. The most generally accepted view is that high altitudes as a rule are inimical to the development of phthisis, and conducive to the recovery of those already affected, while a low elevation above tide water, especially if combined with dampness, continued high temperature, or frequent changes of temperature, favors its development.

Particularly are writers almost at one in reference to the favorable action of high altitudes. Phthisis is not common in the high mountain cities of Mexico, in spite of the unfavorable influence exercised by the bad hygiene of the inhabitants. The disease is almost unknown in the high plateaus of South America, and rare in the high portions of the western United States. Switzerland is remarkably free from it, and it is very rare in the highlands of upper Egypt. In the western Highlands of Scotland, too, it is uncommon as compared with other parts of the British Isles.

It is not known whether the immunity of the dwellers in high altitudes is due to the low barometic pressure or to the purity of the air. The view has not found favor that it is in any way connected with the greater depth of the respiratory act, nor does the statement that microbes live with greater difficulty at a high elevation satisfactorily explain it. That the influence of high elevation is not due, at least entirely, to the low barometric pressure seems probable, since, as is well known, prolonged sea voyages are often of great benefit to phthisical patients. Moreover, some islands, as Iceland and the Hebrides and Shetland Islands, are singularly free from the disease.

It was formerly believed that odors of turpentine and allied substances coming from pine forests were of value in the treatment of phthisis, and it is claimed that to this factor sojourn in the Adirondacks owes the undoubted advantages often exercised by it in many cases of phthisis. There are clearly, however, other important factors, since otherwise all regions filled with these woods should exert the same favorable influence. Yet there are many such districts—as Maine—where the mortality from phthisis is high. One might argue that the mortality in such places was the result of too great a degree of dampness; but in answer it may be noted that many islands, as already stated, where the air is to an extent damp, suffer but little if at all from phthisis. The prevalence of the disease does not seem to be connected with any geographical position or condition of temperature.

Our knowledge in this regard may be summed up by saying that change of climate is very often of the greatest benefit to phthisical patients, and that, as a rule, this benefit seems to be intimately associated with elevation above tide water, though there are many localities with no considerable altitude where a good effect is often exerted upon the disease.

The matter of choice of climate is exceedingly difficult. It is impossible entirely to determine the nature of what might be called "climatic idiosyncrasies" in patients. We are therefore obliged in the choice of a climate for a patient to follow certain rules.

First is to be investigated the individual susceptibility to cold and heat, respectively. We must carefully inquire whether the patient is always chilly in winter or whether he is exhausted and depressed in summer. It seems to be folly as well as cruelty to compel an anæmic, emaciated individual, who is always chilly and whose circulation is feeble at the best of times, to spend a winter in a cold, bleak, windy, northern climate. While the Adirondacks in winter are certainly of benefit to many, it would seem almost proven that they cannot but disagree with others; in fact, experience proves that they do. On the other hand there are many patients to whom even the early spring warmth of Florida is invariably depressing, and who reap no benefit from sojourning there. It is, after all, hygiene throughout, which we must keep in mind, and not merely the effect of a certain climate upon the lung alone, as though it did not belong to the body.

Another factor of some importance in selecting a locality is a knowledge of the diurnal range of temperature. The annual average temperature and the average for each month can usually be ascertained without difficulty for the more frequented health resorts, but the daily variation is not so easily to be learned, and yet it is on just this factor that the comfort of the patient may depend. A perfectly equable temperature is certainly of great advantage. Unfortunately it is not so apt to be found in dry air and elevation above the sea as it is at lower regions, although elevation is, as a rule, much the most important of the smaller dirurnal temperature range.

Still another matter is the nature of hotel accommodations and other comforts; and this has to be considered most carefully in reference to the individual. Though a strong man with beginning phthisis, which has had but little effect upon his general health may do well if sent to a region where he will spend his days in the saddle and his nights in the open air, it is clear that for women and many male patients no such regime can be prescribed.

Patients want to know all these and similar details before leaving home, and it is well if the physician can help them in this respect. In many cases, however, circumstances prevent more than the pointing out of a general plan of action, especially as the number of places in different parts of the world recommended as health resorts in phthisis is so large.

Individuals with beginning phthisis, who are unwilling to make a radical change, or in whose case the physician does not deem it expedient, might seek Florida in winter, returning northward in the spring

by slow stages, stopping en route in Georgia and North Carolina. In the summer some mountain resort should be selected, preferably the Adirondacks. There are, nevertheless, weighty objections against this course. It is very difficult to return north without feeling the bad effect of the change of temperature, while a still greater objection is that that length of time during which this continuation of travel must be persisted in is too great for the patience of the invalid, thus kept so near home and occupation and yet debarred from them. It might be well in some instances to begin treatment in this way, but if the physical signs are well marked only the shortest trial should be given to this plan, as valuable time may be lost thereby. These more advanced cases, if in fairly good condition and offering good hope of final recovery, should be once subjected to a radical change of climate—either for an indefinite period or for life.

Of all American climates perhaps the high altitudes of Colorado are to be preferred, since here can be found comfortable accommodations combined with pure, dry air and high elevation. In the "parks" of this State are table lands of 10,000 feet elevation above the sea, protected by surrounding mountain peaks, and with an annual range of temperature less than in the Eastern States of the same latitude. Sudden dirurnal changes do occur, but to no greater extent than in all elevated regions. The rainfall is also very slight. It has been stated that the dust prevalent as a result of this is irritating to the respiratory tract, but this is denied by those who have accurate knowledge in the matter. Certainly in spite of the thousands of phthisical patients who frequent the State, the death rate from consumption is very low.

New Mexico and Arizona offer somewhat similar advantages in the way of climate, but the facilities for living are not so great. The summers, moreover, are apt to be very hot. There are localities in Texas, too, which are excellent.

Southern California presents the advantage that patients can easily vary their elevation from the sea level to a considerable mountain height, according to the different seasons of the year, and to what is found to suit best their health.

Florida is not regarded so favorably as a resort as formerly, and physicians preferring high altitudes will not, of course, recommend it at all.

The greatest difficulty in choosing a health resort in the United States is that the patients have no large selection and the stations are often very widely separated, so that invalids may be obliged to remain for months or years in one or but few localities. In this respect Europe offers many advantages.

European consumptives can select from a large number of summer and winter stations, all equally good. The passage from one to the other may be made gradually by means of intermediate stations, what suits one patient for winter, for example, being entirely too rigorous for another. For summer time there is, as a rule, probably no better place than the Engadine valley in Switzerland. This valley, however, is scarcely free from snow before the middle of June or the 1st of July, and becomes cold early in the fall, so that as a pure summer resort it is not long tenable. It is also subject in summer to cold and disagreeable winds. In spite of this it is unexcelled by other localities for the climatic treatment of pythisis. Davos-Platz and the neighborhood of Zermatt also fill the requirements of elevation and coolness during the hotter summer months. There is no difficulty in choosing among a number of other places equally well adapted. Lower valleys may be selected if the summer is unusually cool, but the higher elevations are much to be preferred as far as freedom from phthisis is concerned. Farther east there are various resorts in the Dolomite region which are highly recommended. There are of course other places throughout the mountains of Germany, but for American patients Switzerland and the Tyrol offer every advantage to be derived from climate, and the presence of excellent facilities for good living.

The choice of a place for early summer and early fall is a rather more difficult matter. Interlaken, the neighborhood of Lucerne, and the shores of Lake Geneva are probably the best. Vevey and Montreux form here excellent intermediary stations. Ischl and Reichenhall, in Austria, are also recommended, and the Black Forest, in Germany, presents many attractions. One station which offers in some respects peculiar advantages as an intermediary station is Meran, in the Austrian Tyrol. It is beautifully situated and sheltered from the winds, and patients are well able to spend a great deal of the time in the open air.

In the choice of a winter station for weakly individuals, who shun any degree of cold or variation of temperature, it may not seem best to select an elevated station. For such the south of France, the sonth of Italy, Sicily, or the Riviera, have long and justly been popular. Or the patients may pass from Europe into Egypt, Algiers, or Morocco. But for uniformity of temperature and of barometric pressure there is probably no place known equal to the Canary Islands, but Madeira, once so famous, has fallen rather in disrepute. For a large number of phthisical persons a dryer, colder and more bracing climate at a greater elevation is more suitable, even in winter. For these Meran is eminently adapted, provided only a moderate degree of cold is desirable. The sunshine here is always quite warm, and patients are able to sit out of doors in it the greater part of the day.

The guiding maxim is that such a climate is to be selected, either for summer or winter, as will allow the greatest amount of exercise in the open air with the least discomfort to the patient, and with the greatest advantage to the general health.

The widespread prejudice against high altitudes in cases of decided tendency to hemoptysis is, in the opinion of the best authorities, unwarrantable, for patients with this tendency are, perhaps, even safer in the mountains than at the sea level. The cases most suited for climatic treatment of any kind—as, indeed, for any other method—are those with but slight infiltration, with but few symptoms of the disease, and with strength sufficient to permit of abundant exercise. Other cases, with a greater extent of pulmonary lesion, and with a less degree of strength or of resistance to cold, will probably need the lower, warmer winter resorts, followed by the intermediary stations, and these again by the

highest elevations for the summer months. In a still more advanced stage of the disease, especially where there is much elevation of temperature, with severe subjective symptoms, the patient is not in a condition to stand much traveling, nor to take much exercise. In such cases cold situations are put out of the question. A warm, equable climate is to be chosen, and the nearer home the better. If improvement take place, a more mountainous locality should be sought as soon as possible. The existence of fever is not, however, *per se*, a contra-indication to high altitudes. It has often been observed that patients lose all fever soon after reaching the mountain resorts. Nor is the presence of a cavity a contra-indication in the selection of high elevations, provided the lung is not evidently rapidly breaking down. Cases which are very far advanced and evidently hopeless should not, of course, be sent away at all, for only a hastening of the final end of the disease can come to the patient, with disappointment to the family and reproach to the physician. It should be also clearly explained to the patients in whatever stage the disease is, that change of climate is not an infallible cure, and further, that with it must be conjoined all other necessary hygienic, and dietetic measures, together with the employment of such medicinal agents as are indicated by the disease.

If the case has advanced before you have had the opportunity of advising a change of climate, and cavities have formed, it is not advisable to expose the patient to the hardships and inconveniences of travel. In this case it is far better to keep the patient home and treat him there as well as possible. He can be treated at his own home or in some sanitarium. The usefulness of these sanitoria is being recognized, and certainly they possess the facilities for scientifically treating this disease far beyond the resources of the average home.

THE TREATMENT OF INCIPIENT PHTHISIS AT HOME

By J. Howe Adams, M.D., Overbrook, Pa.

If the physician is compelled to keep the patient in his own home it is well to formulate some definite plan of treatment, of which the following outline has been in my experience the most satisfactory. The first thing in the line of treatment is to realize the necessity of keeping the patient out doors and in the sun as much as possible. The cold weather is no contra-indication to keeping the tuberculous patient out of doors as long as it is clear, dry and not too windy. If, however, fever exists, it is perhaps well to keep the patient at rest; he can then be put in an invalid chair and occupy the sunniest room in the house. He should be very warmly wrapped up and the window should be kept open as much as possible from time to time, taking care to see that there are no circumscribed draughts, such as from cracks, etc.

At night time the room in which the patient sleeps should be well ventilated, and yet at the same time the temperature of the room should be kept moderately high and the raw air of night should be warmed.

The question of the clothing of the patient is of the greatest importance; the underclothing should be of pure wool, so that the patient is protected from sudden chilling of the body, and if there is sweating the perspiration is absorbed and the body kept dry. This consideration of clothing should include even the question of stockings. The physician should see that the patient gets plenty of good, nourishing food; especially is plenty of meat particularly necessary. The patient's digestion should be carefully watched and guarded, and consequently the greatest discretion should be exercised in feeding. Plenty of milk, if it agrees with the patient, is very desirable.

The question of feeding "fat" to tuberculous patients is one that is of the greatest practical importance. There is no doubt that fat is one of the vital constituents of the body. It acquires great importance from the fact that it disappears on the first onset of phthisis and comes back only as the patient improves in health. The use of the scales for weighing patients in this disease is a practical admission of the value of keeping or acquiring adipose tissue. Therefore if the physician can supply fat to his patients, he is doing what nature expresses in her cure of the disease..

It is well to study the physiology of metabolism before deciding whether the feeding of fat to a consumptive patient is going to secure the desired results. Does the fat consumed by the patient turn into fat, or does the human economy manufacture its own fat? Liebig showed years ago that fatty and saccharine foods do not supply exclusively the fat in the body; it is well known that the butter in a cow's milk far exceeds the scanty amount of fat which she eats, while in the bee it is demonstrated that she produces far more wax than can be explained by the amount of sugar she obtains. It has been proved by experiments of Lawes and Gilbert "that for every 100 parts of fat in the food of fattened pigs, 472 parts of fat were stored up," which shows, apparently—for the human being is very like the pig, at least in digestive powers—that only about one-fourth of the fat consumed comes from fatty foods.

Dr. Thomas J. Mays, who has worked in this field, has given us the clearest explanation of the process by which the fat is stored up in the economy.

"The fat of the body is contained in cells which are composed of protoplasm and possess nuclei. These cells abound in the interstices of loose connective tissue, and are found under the skin, especially in the soles of the feet, the palms of the hands, buttocks, female mammary gland, around the synovial capsules of the joints, in the orbits, in the medullary canals of bones, in the surroundings of the kidneys and the omentum, and on the surface of the heart.

"When an animal fattens it appears that oil globules are formed within the fat cells. These globules increase in number, while the protoplasm of the cell diminishes. These globules are not deposited in the cells in a mere mechanical manner, but they are formed by the cell itself, and at the expense of its own protoplasm, which becomes very much attenuated. It seems, therefore, that the fat of the body is as much a secretion of the fat cells as

pepsin is a secretion of the peptic glands, or as the oily matter of the skin is the secretion of the sebaceous glands, or as the fat of milk is the product of the cells of the mammary gland."

That proteids form an important source of fat in the body is evidenced by the following facts: Microscopic observation shows that the fat of milk is formed by the epithelial cells of the mammary gland through the probable metabolism of protoplasm. Fat in milk is largely increased by albuminous, and diminished by fatty foods. When cheese "ripens," its proteids are converted into fat. Milk sugar is maintained in abundance in the milk of carnivora, even when fed on an exclusive meat diet. Fatty degeneration, as is often witnessed in the heart and in other important organs, is further evidence that proteid substances are converted into fat.

By this I do not wish to convey the idea that albuminous foods supply the greatest part of the fat to the body; we know that this is done by the carbohydrates; but I desire to lay special emphasis on the fact that fats and oils do not play the important part as foods which they are popularly supposed to do in the nutrition of the animal body, and on the further fact that proteids are of greater value as fat producers in pulmonary consumption than they are generally believed to be. In fact, evidence is not wanting to show, as has already been hinted at, that both fats and carbo-hydrates diminish the metabolism of the body, while a meat diet enhances the same, increases the oxidizing activity of the body, multiplies the number of red blood corpuscles, and leads to a rapid consumption of fatty and carbo-hydrate food. A great deal of harm has followed the doctrine that the fat of the body only comes from the fat of the food, and therefore the only way to fatten a consumptive is to ply him with fats and oils of various descriptions. Every experienced physician knows that oils and fats produce dyspepsia in many such patients, and do no good in some with whose digestion they seem to agree, while there are a few who thrive under their use. It seems to me that oily and fatty foods only confer a real benefit on a minority of consumptive sufferers, and that much greater service is rendered to the nutrition of such patients by the administration of albuminous foods, the important ones among which are freshly expressed beef juice, beef, mutton, lamb, milk, eggs, oysters, clams, liquid peptonoids, beef powder, meat juice, beef peptones, etc.

The proper status of giving fat in this disease is undoubtedly in allowing the stomach to be the guide. Give up fats to the point of toleration, but be careful not to get beyond. In the hands of many practitioners "forced feeding" has proved of great service in the treatment of these cases. In this procedure the stomach is washed out and the patient is given two pints of milk, to which has been added eggs and powdered dried beef. Again it is well to remember the general maxim that anything is valuable which will improve the condition of the patient.

Whiskey and the various forms of alcohol given indiscriminately are not desirable, as alcohol is not in any sense a remedy for this disease; but given in combination with cod liver oil it is very useful in promoting the assimilation of the oil. It can be given very nicely in the following manner: Put one-half ounce of whiskey in a conical wine glass and on top of this place one-half ounce of cod liver oil; this is to be taken just before retiring and the same amount to be repeated in the morning. By taking it night and morning in this manner time is allowed for the stomach to get rid of one lot of the oil before the next is taken. The whiskey is not given especially for the purpose of masking the taste of the oil, but rather for the double action thus produced.

Whiskey and cod liver oil are not specifics or even remedies for tuberculosis, but as they improve the patient's general condition they indirectly help to combat the disease.

The systematic teaching of chest expansion is a great factor in the prevention or control of this disease in its first stages. In my experience it has been attended with the most gratifying results. If the medical profession would make a united effort for the adoption of the teaching of the proper method of breathing, much could be accomplished in the stamping out of this disease in future generations. It has been stated that our breathing surface is one-fourth greater than is necessary, but is it reasonable to believe this? The great strength of the lion and tiger is due largely to their great capacity for breathing; the professional bicycle rider must develop "wind" or he is useless. If a physician can examine the great athletes, especially those accustomed to prolonged exertion, such as bicycle riding, he will be surprised at their chest expansion. I saw Sandow's expansion measured and it reached the enormous total of 14 inches; the effect close to him was as if the athlete had some powerful engine which forced his ribs in and out. And yet Sandow told me that at eighteen he was a delicate lad who was ordered to take up exercise to regain his health.

The lungs are not simply to purify the blood of carbonic acid, but also to give health and strength to the whole body.

Nearly all children at birth have well developed lungs and their blades do not stick out, but are flat against the chest. Nature always does the best that is possible under the circumstances, and when all preventative influences are removed will often do wonders, both in fortifying the system against disease and in recuperating wasted energies. How important it is that in youth, and in the vigor of manhood, and through all the years that the scapulas should remain flat against the chest, the weight of the arms and shoulders inclining backward taking their weight off the chest, thus always expanding instead of contracting.

When a child arrives at a suitable age to attend school it should receive the same careful training physically that it does mentally. Physical culture should occupy as prominent a place as any of the sciences that are taught. Some form of exercise for chest expansion, that may be deemed the most suitable for the school room, should be practiced at each session by every pupil at least ten minutes, an extra supply of fresh air having been previously admitted to the room. This would soon become a luxury for the children, and they would return to their studies with greater zeal and energy for the invigorating exercise. They should be required to sit erect, and encouraged to walk erect when out of school. Monthly reports should show results ob-

tained by these exercises; in fact should be included in term averages, as required for promotion.

Deep breathing, with moderate exercises (in a cool room or open air) of muscles of the chest, does not exhaust, but is invigorating to wasted energies; rest is sweeter, and sleep more refreshing after such exercise, which should be regulated according to the strength and condition of the patient.

When it comes to the question of the consideration of medicine, although the number which have been proposed is legion, the physician's armamentarium is practically not a large one. Creosote is undoubtedly a useful drug in pulmonary tuberculosis, and it can be given in combination with cod liver oil. It can be given at first in one minim doses and then increased to about 10 minims three times a day.

The creosote should never be given in the form of capsules, because when the capsule dissolves in the stomach it releases at once and at one spot a considerable quantity of an irritating substance. It should be given either in pill form, in alcohol or in hot water. Sherry wine also forms a good vehicle for its administration. Creosote is not now regarded as a specific for tuberculosis, but it acts on the bronchial tubes, relieving and lessening the cough.

Opium or its alkaloids can be given, and they frequently do good by relieving the irritating, hacking cough and increasing the tranquility of the patient. Very often happy results follow the administration of paregoric in the early stages of the disease. It should be given in one or two teaspoonful doses at bed time, for the purpose of controlling the cough and obtaining for the patient a restful quiet sleep. But no cough mixture, sedative in character, should be allowed in the morning, for at this time the patient should be permitted to cough up the material that has accumulated in his lungs during the night. In this way it is possible to get rid of a considerable amount of septic material that otherwise would remain in the lungs causing irritation, and some of which would undoubtedly be absorbed, producing an increase of fever, upsetting the digestion of the patient and dragging down his general health.

If paregoric is found to be inefficient in controlling the cough a sixth or a quarter of a grain of morphia may be given hypodermicallly. For the night sweats atropine, in doses of from 1-100 to 1-60 of a grain, is by far the best drug, but at the same time it may be found of advantage to sponge the patient off with a solution of alum and water.

A STUDY OF HABITS OF LIFE AND CONSTITUTION LEADING TO APOPLEXY.*

By Elmer Lee, A.M., M.D., Ph.B.

IT is rare that an animal dies of apoplexy, but man's days are frequently ended by this disease, coming upon him generally later than the age of fifty. The contrast between the simple life of the animal and the complex one of the man is in favor of the former, so far as it relates to health. At the beginning the young animal and the child are on the same natural footing; both are nature's sweet and innocent children. Little by little the child grows away from dependence upon natural methods for its guide, substituting the artificial as life advances and ever becomes more complex. But the animal pursues an even tenor of regularity and simplicity, avoids the excesses and escapes the sad consequences of sickness, pain and premature death.

The beginning of disease is at that moment when the laws of health are first violated, and starts with infancy and childhood in the majority of cases. The great love of the parent for the offspring gradually yields to the desires of the young, even though inconsistent with reason, and the gratification of them detrimental to its best present and future welfare. In the young vitality is vigorous, and in spite of bad care and over-indulgence from the well meaning parents, it carries a large proportion of the children to adult age and beyond. The early mistake in the training of the child is the principal factor that develops into the disaster of the later years. When the child comes into the world it is ignorant of the requirements necessary for life and health, and is at the mercy of conditions beyond its power to change with reference to those who shall conduct the young life safely, or to its destruction. The laws relating to preservation of health being so little comprehended and so much neglected, afford just the state of things suited to start the beginner in life into the wrong path. The early impressions, very hard to correct later in life, added to misapprehension and error in the process of growth, lay the certain foundations for disease and premature fatality.

Each nationality has its peculiar domestic customs which are transmitted to the offspring, and while some of these habits of life are innocent, many of them are directly fatal in due course. The German teaches the infant to cultivate a taste for mild liquor of the nature of wine and beer. The youth is encouraged to drink the health of the fatherland, while the adult saturates every cell and tissue in the body with a 4 per cent. solution of alcohol in malt, with supposed security and a conscious feeling of superiority to his neighbor, who tipples with high wine and whiskey. The drinker of the weaker beverage makes up in quantity what his favorite drink lacks in strength, as compared with the stronger poison of French or English friends. The result in all cases is the same, provided enough is taken and for sufficient time to destroy vital processes.

The American is the jolly associate and imitator of the convivial foreigner, freely indulging in his virtues and vices, and equal to him in the consumption of potations both mild and strong. Familiarity with the titles and literature pertaining to alcoholic poisons, otherwise known in polite circles as "cocktails," "gin-slings," "brandy-smashes," "Tom and Jerry," and "nightcaps," together with a very long list of fantastic names supposed to represent some peculiar virtue, forsooth, that which is good for man, is early acquired by the youth who are to constitute later the apoplectic surprises which are noted in the daily morning paper, thereby forming a morsel for comment even by those who are in the same danger but heed it not. In natural health the ideal desire is to prolong life and to walk in pleasant paths. Everyone hopes to escape pain and sickness, and of the many who so desire, a few only succeed. Nature is most gentle and tender, but at the same time absolutely just, and what is suffered by man is

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through either folly or ignorance in his blinded eagerness to attain the satisfaction of a bauble.

So long as the grape grows and the fermented juice is brought habitually in contact with the delicate cells of a human body, and while human food is mixed with acidulated alcohol in the form of frothing beer, that man who loves the solace of these potations, and who persists in the mistake that he is stimulated and thereby refreshed, is sure to fall a fatal victim to an implacable fate which patiently waits and finally seals his doom. There are many who belong to this unfortunate class that escape apoplexy to fall earlier in life from maladies with different names, but hastened and effectual in their fatality from even that abuse of the alcoholic influence disguised under the fair apology of moderation. With an error of life of such wide and extended daily use as that of habitual drinking of liquor is there anything strange in frequent fatalties due to apoplexy?

The number of fatalities from apoplexy would be even far greater if it were not that death claims many victims of wrong living ere the course of mistakes run by weak and deluded humanity reach the apoplectic goal. This is a frequent disease among the higher classes, for it is in ths class that those excesses which contribute to produce apoplexy prevail to such a degree as to keep the press supplied with obituaries of those accounted distinguished and possessed of lovable characters.

Apoplexy refers to an accident to an artery in the brain, resulting in intracranial hemorrhage and pressure, causing sudden loss or diminution of sensation and power of voluntary motion. The artery ruptures through inherent weakness of the wall from previous disease. The accident is likely to be fatal, but there may be one or several strokes or ruptures at varying intervals before the patient perishes. The rupture of an intracranial artery, if near a vital nerve center, rapidly brings the life which has lived in disobedience to nature to an abrupt termnation, but if the artery ruptured is somewhat remote, protracted paralysis, more or less complete, is the result.

In the light of the experiences of yesterday, it would be possible to pass the earthly days without apoplexy save in most rare instances, were the wisdom heeded which is gained by the knowledge that not one who has lived in violation to natural law has escaped a penalty exactly in proportion to his transgression. So intense is the demand for artificial stimulation when once the natural appetite is perverted by thoughtless and innocent indulgences, later by fierce and uncontrolled intemperance in eating, drinking and sinning, in desecration of the holy temple of health, that life without these health destroying agents seems to such characters a failure. The acceptance of artificial and false doctrines perverts in gradual degree the habits of the whole race. The American teaches the child to prepare for fatty degeneration and its consequent choice collections of bodily afflictions, by setting examples that if followed, lead to destruction of health and loss of life.

The coffee pot is high ruler of the table and the digestion of the American family, and dyspepsia prevails, to the consternation of all classes and of nearly every age. The sauces and vinegars, the relishes and dressings, the salads and sweets, innocent in themselves, but habitually used and abused, poison the nourishment of the body, enfeeble the circulation and weaken the vital resistance. The source of weakness as well as that of strength is regulated by the stomach, and in this organ arise the initial causes that tend to sickness and death of the body. As has been truly stated by Dr. Page, of Boston, "dyspepsia is incipient consumption", thus it may be also clearly proven that from the same source arises that condition which finally ends life in the apoplectic stroke.

Too much to eat is a misfortune which has for its penalty lack of digestion and failure to relish with a keen satisfaction the whole blessing that food is intended to confer, while to the multitude, who have insufficient food, the hardship would not be a misfortune so great if the knowledge of food and its best use was better understood and practiced. One class has too much and the other too little, and to both come disease, for in each case the natural laws of health are violated in the selection of the articles of diet, and in the preparation which civilized cookery has visited upon the members of the human family.

The almost universal custom of three meals a day finds favor among physicians and the laity alike, and even in the treatment of sickness, when the system is embarrassed and struggling to overcome the effect of a surfeit of food forced into the unwilling human machine against the prolonged remonstrances of the digestive organs, it is a common practice to overfeed the patient. Through excessive feeding and insufficient elimination the load ever increases, and when nature is outraged to the limit of forbearance, mild protest is succeeded by partial or complete failure to proceed further. Strange as it may be, and frequently by advice of the professional mind, the very cause of the sickness is kept up by an amount of food and of an improper character, which, while it would not amount to a surfeit to the well, does further interfere with a rapid restoration to health, and is not infrequently a direct factor in stretching a slight matter into a long sickness with recurring relapses and death.

The hardy out-of-door laborer, swinging his pick and working with the shovel, is entitled to three meals a day, for they are earned and likewise needed. But this class does not constitute the apoplectic victims. This advantage, if balanced with temperance among the wage earners, would augment their happiness and add years to life and minimize their sorrows. Correct information regarding the essentials of eating and drinking for the sustenance and comfort of health has and ever will stand as the first requisite toward the prevention of sickness and apoplexy, and while it is either misunderstood or neglected, life will be robbed of its sweets to the individual, and society of lovable and useful characters. Two moderate meals of natural and healthful food is the limit that constitutes safety to the higher classes. A morning and evening meal, with bread and fruit for the midday refreshment, with water instead of artificial drinks, would spare the waste of good friends and distinguished public men, a class generally at the mercy of fashion in eating, and to the quickening cup, with injury in moderation and fatality in excess. That person who has any symptom related to the digestive organs needs advice of the highest order, and if the case progresses toward a worse condition it would be far better to

seek counsel from a competent medical adviser, and never from the plausible and cunningly worded falsehoods for whom newspaper and almanac cures are invented.

Careful experiments with different materials and weights used as clothing for the human body have established that the modern dress of heavy flannel beneath the woolens outside, with additional accessories to dress, even in cold weather, is in excess of the requirements. Then how much more unnatural is it to wear more than is needed in mild and warm climates, and such as includes New York and Philadelphia? By dressing the body with too much clothing dangers to health are increased and recovery from chronic diseases retarded. As a plant would soon die without its trunk and branches freely exposed to air and light, so the human body dies gradually from the lack of proper and adequate ventilation, though the contributary cause is often overlooked, or disease and death attributed to other explanations. The best light-weight underwear procurable in either silk, cotton or linen mesh for the youth and the adult, in health or sickness, is indicated both in winter and summer. Flannels are no longer recommended for scientific reasons. Wool underwear is popularized by plausible arguments, which are generally accepted without question. The long list of distressing skin affections owe their origin principally to unsanitary underwear. Such underwear keeps the human skin injuriously congested in summer and dangerously clogged in winter, producing thereby skin diseases without and complications within. He who encases his body in impervious wool directly invites both discomfort and disease. His skin is debilitated, while the tone of the vitality is lowered.

Then with a correct food supply and the use of pure water for the drink, freely taken all through life, together with a right use of proper covering for the body, such as will admit of enough ventilation (seldom found among my patients and the sick generally), together with sound medical counsel, places it within the reach of the average individual to avoid a premature fatality. Open air exercise is indispensable to the preservation of health and to the prevention of apoplexy. The causes of sickness and disease are the early causes of apoplexy, and prevention and escape from fatility obligates the individual not to violate natural laws of organization and vitality, or indulge in coarse jeer at health requirements. To the hourly and daily and non-compromising demands to practice wisdom, there is no appeal, and the penalty for oft repeated infractions of nature's code for man's use, is paid with a forfeit of his one life.

PUERPERAL ECLAMPSIA.

By Alfred S. Mattson, M. D., Moorestown, N. J.

IN August, 1891, I was engaged to attend Mrs. S—— in confinement, which was expected March 7, 1892.

Mrs. S—— was a blonde, fairly stout, thirty-two years of age. Had been occasionally my patient for two years preceding. Suffered some from poor circulation and weak heart action, but with no organic trouble, and up to the time of confinement no renal lesion.

Her urine was carefully examined every three weeks during pregnancy and showed nothing abnormal. Patient's general health during pregnancy was excellent.

She spent much time out of doors, and had ample means to allow her to pursue life in its most pleasant way.

She had been confined at term twice previously, and from her former physician I learned that both had been trying labors, instrumental and under ether.

On February 22 was called, and found her suffering from influenza, which rapidly yielded to treatment. February 29 was again called Some pain was felt. A sample of urine was obtained, and as before revealed nothing.

Dilatation began in the afternoon of March 1, and at 12:30 A. M. March 2 was hurriedly summoned, and by 1 A. M. in a perfectly natural and very easy labor a 9½ pound boy was born.

No sooner was the baby born than my patient put her hand to her head and complained bitterly of headache. This was the first head symptom noticed. Belladonna was given in water every half hour when awake, but she slept the greater part of the remainder of the night, and the next morning I found her better. Pulse, temperature and lochia normal, but some œdema of face showing.

A catheterized specimen of urine showed a trace of albumin only. The urine was scanty.

In the afternoon there was considerable nervous excitement and a return of headache—due to the coming of the nurse. Gelsemium tincture, 2 drops every two hours, was given, and a milk diet exclusively.

At 2:30 A. M. March 3 I was summoned hastily, to find her convulsed, opisthotonus, frothing at mouth and unconscious. She had not slept at all, and had complained previous to the convulsion of intense throbbing headache. Glonoine 1-10 was at once given, 1 drop every ten minutes, much of which undoubtedly ran from the mouth; but some of it held in contact with the tongue by the wrapped handle of the spoon, which was held between the teeth.

With each convulsion a little chloroform in a handkerchief held to the nose mitigated the severity. During two and a half hours she had ten convulsions. As they grew milder and further apart the chloroform was dispensed with. Glonoine 6-10 was now put in a third of a glass of water and teaspoonful doses given every hour. Consciousness returned to a slight degree by the afternoon.

The urine was 50 per cent. albumin. Epithelial casts were present, and urea diminished. Her temperature varied from 101-103 degrees. Respiration for several days ran as high as 50-60; pulse 120. Delirium was marked at times. Marked pulmonary œdema and embarassed heart action threatened her repeatedly. Arsenicum 2 × gradually changed the condition, and at the end of four weeks she was sitting up each day a little.

After the fourth day the urine became abundant, œdema decreased and repeated urinary analysis revealed an improvement, until finally no abnormal showing was present.

The lochia after the third day was suppressed, and the mammæ showed no signs of activity. At

the end of six weeks she was entirely convalescent, with exception of the mental condition.

She had a clear memory for events of her childhood, but no recollection of her pregnancy, and only took her baby on faith, and so it was to the end.

The menstrual flow returned in six months, and preceding it by a few hours were three distinct epileptiform convulsions—the first since the confinement. These came with each menstruation and at no other time.

The right ovary showed some tenderness and congestion at all times. A lacerated cervix was repaired; the uterus was in good positon and normal.

The convulsions and loss of memory were unbearable to a woman who was unusually intelligent and capable. She determined to have relief at any cost.

After a prolonged trip abroad, fraught with no good results, consultations were held with several prominent men. Opinions differed. Oöphorectomy was advised by some, and by others regarded as not only valueless, but liable to hurry the case to insanity. The indicated remedies were given, and with no effect.

Finally oöphorectomy was decided on—against the judgment of the writer, and at a time when a menstrual period had been missed for six weeks, a condition never hers except when pregnant. The operation was skillfully performed by one of our best surgeons, and the patient on the third day passed away from so-called secondary shock.

The right ovary was somewhat congested and thickened, the left normal.

The occurrence of a series of particularly severe convulsions at about the time of the missing period hurried the decision in favor of the operation.

The autopsy revealed normal kidneys, heart, lungs and liver, a brain boggy and œdematous—to such a degree that it rose from the skull like a large wet sponge when the calvarium was lifted. The uterus was pregnant.

Possibly the end came as well as a result of operation as though the case had been allowed to run its natural course.

The pregnancy and its termination would have been uncertain, the child with such a mother a possible burden. The case had many interesting features and many uncertainties, which were only cleared up by the autopsy.

THE LIMITATIONS OF CONSERVATIVE SURGERY OF THE UTERINE APPENDAGES.

By Homer I. Ostrom, M.D, New York City.

TRUE conservatism in surgery is frequently in the direction of the most radical measures; such I believe to be especially true of the surgery of the uterine appendages. I have little confidence in incomplete operations upon any portion of the body. When we, as surgeons, decide that medicine cannot cure, and that the only treatment remaining is to remove the diseased part, or organ, let us do our work thoroughly. Let us not leave any portion behind, either to form a nidus for future disease, or necessity for a future operation. Let us make our wound pathologically clean, as well as surgically clean, and let us not trust to nature to do the work that we should ourselves do. That many ovaries are sacrificed, that many operations are performed upon the uterine appendages, without justification, even the most radical among us will concede; and we all have felt that the time to call a halt in the wholesale destruction of the female reproductive organs has been too long delayed. This question, however, frequently advanced as an argument in favor of conservative surgery, does not apply to the complete removal of disease, even though that completeness necessitates the entire ablation of the organs. Unnecessary operation is one thing, incomplete operation is quite another. In the first we have no possible excuse for the mutilation; in the second, the operation is justified by the existence of disease, which we as healers are bound to remove to the best of our ability.

In determining the limits of conservative surgery of the uterine appendages we will receive assistance from a consideration of the theoretical, as well as the practical side of the subject. The *first*, or theoretical side, is based upon conclusions drawn from our knowledge of the physiological, and pathological behavior of the organs operated upon. The *second*, or practical side, relates to statistics, and has to do with the results of conservative operations whether they have been curative, and whether or not a subsequent operation has been necessary to effect a cure.

The physiological activity of the ovaries is probably more or less constant, and not spasmodic, as formerly held. We have therefore to deal with an organ that has no resting time, but is always in some one of its parts functionally active. The Graffian follicles are either preparing to rupture, are rupturing, or are healing after rupture, affording the organ little if any rest. As *rest* is one of the first and most important elements of success in surgical repair, the bearing of these physiological data upon conservative surgery, or rather incomplete surgery of the ovary, is apparent. If we wish to repair the uterus we seek to operate at a time when the organ is at rest. If we operate on the rectum, we first as a prerequisite of success paralyze the sphincter muscle. If we operate on the bladder, we provide drainage to give the organ rest, that the parts may heal more readily. If we operate upon the intestinal track, we diet our patients before and after the operation, with a view to insuring quiet of the digestive organs. As the functional activity of the ovaries and Fallopian tubes is not in our control we cannot avail ourselves of a period of rest in which to operate, and therefore if in our operative technique we leave a portion of the organ, the process of repair will be subject to such handicap as the degree of activity of the organ imposes.

Again a very large proportion of the diseases of the uterine appendages requiring operation have their initial pathology in inflammation, proceeding, as the case may be, to exudate and adhesions, or to pus. Occlusion of the tube, or gluing of its fimbria to the ovary, are of frequent occurrence—I have found abscesses in the appendages less frequently that other surgeons report. Another condition that almost makes up the quota of lesions of the ovaries calling for operative interference is multilocular

cystic degeneration, the ovary retaining nearly, if not quite, its normal size. It will of course be understood that I am not now speaking of large ovarian tumors. We do not see many of these nowadays; they are not allowed to develop. I refer to a true cystic degeneration of the ovary. The organ is not of necessity much enlarged; I have in some instances found it rather smaller than normal, but it is occupied with a varying number of cysts, the septa being formed by dense connective tissue. These "follicular cysts" are dilated Graffian follicles, and together with cysts of the corpus luteum, are to be considered as retention cysts.

Judging from the behavior of glands, in general, the error of retention is not confined to a single part. Though the breast is a duct gland, and the ovary is ductless, the former may be taken as an illustration of the point I wish to bring out. It is very rare for retention to affect one part of the structure, and not soon to develop in another part. The same erratic functional activity, or shall I say, insane functional energy, that shows itself in one part has a strong tendency to show itself in another part of the same organ.

Let us take the testicle, more nearly analogous to the ovary, though a duct gland. Here the retention always affects more than one tubule, and the disease is multiple. Again, the thyroid gland, one of the ductless glands. The follicular, or retention cysts of this gland, are never single, but develop in large numbers, giving the appearance upon sections, as with the ovary, of a sponge, with large open meshes. What I wish to point out here as bearing upon the conservative surgery of the ovaries, which would remove only a portion of the organ, is, that in the disease under consideration—and this disease is one frequently operated upon, the attendant symptom being little more than pain without any well defined lesion discoverable before opening the abdomen—the cysts are multiple, and that the follicular degeneration is not confined to one part of the ovary, but involves the whole organ. That even if at the time of the operation a portion of the gland seems to be healthy, the erroneous impression has been conveyed to the organ, and is not arrested by the removal of the apparent area of disease.

Let us now consider ovarian abscesses and their conservative treatment. Pus cannot form without infection, and therefore if suppuration takes place in the ovary the micro-organisms have found their way from without, either by way of the vaginal canal, or through the intestinal walls. But whether the infection is the gonococcus, the streptococcus, or the staphylococcus, the pathological condition that precedes the formation of pus affects the entire organ; that is, the whole ovary is inflamed, and liable to harbor pus cocci in any of its parts. The removal therefore of an abscess, or more properly speaking, the opening of a collection of pus, aside from the difficulty of drainage which such an operation would involve, gives no assurance that the disease is cured, or that another abscess will not develop.

Let us now turn to a consideration of the Fallopian tubes, and their incomplete operative treatment. Here are the same class of changes that we encounter in the ovaries, save the follicular degeneration of the latter organ. That is to say, the pathology is associated with inflammation and its results. Tubal adhesions are of frequent occurrence, the new structures forming between the ova-duct and any organ with which it comes in contact. The ovaries, the uterus, the intestines, the posterior culde-sac, become glued to the tube, and can be ated only at the expense of a loss of peritoneum. Inflammation attacking the mucosa of the tube results in defective drainage, very much as in appendicitis, the tubes becoming closed with the extension of the consequent swelling, and the infected contents, having no exit, soon becomes purulent by the invasion of micro-organisms.

We may well ask ourselves, therefore—and it will be remembered that we are here dealing with the theoretical aspect of the question—What may be expected to result from breaking up of adhesions betwen serous surfaces; whether we can permanently restore by operative means an occluded mucous canal, or whether we can successfully open and drain an abscess of that canal, without removing the entire organ? The conditions remaining after breaking up adhesions between the Fallopian tube and any organ to which it has become attached by inflammatory exudate, are exquisitely favorable to a renewal of those adhesions. It requires but very slight irritation to cause serous surfaces to adhere, and when such surfaces are denuded of their protective covering, as in the breaking up of peritoneal adhesions, their tendency is to reunite, and from the additional irritation caused by the manipulation necessary to effect separation, the secondary adhesions become more dense and extensive than the primary one. If the fimbria are separated from the ovary, what is to prevent them from again resting on that organ under conditions highly favorable to the renewal of adhesions? If a section is made of the Fallopian tube to overcome stenosis—if when acquired it is the result of inflammation—what reason is there to expect that thereby the cause of the defective drainage is removed, or that cicatricial contraction will not again close the tube, as it frequently does the intestine, though a canal of large calibre, unless sutured with the utmost care, or the gall duct, when section is made to remove calculi? These canals are very small, and during the process of union they are still smaller. Drainage is interfered with, and the condition remains much the same as before the operation.

Now as to the treatment of abscesses in this location, by conservative methods. We have seen there is a strong probability that when an ovary becomes inflamed the entire organ suffers to a greater or less extent. That when an abscess develops in the ovary the whole gland is more or less infected, and is ready under slight provocation to develop multiple pus centers. The opening of a single abscess, therefore, will not with certainty arrest the suppurating process. Moreover the difficulty of maintaining drainage, which I consider essential to safety when there is a suspicion of pus in the abdominal cavity, of an ovarian abscess, introduces an element of danger that I am quite unwilling to assume. If we could with certainty say that we have removed the entire germ-producing area, conservative surgery of appendical abscesses would rest upon a basis

of science, common sense, and professional duty; but we cannot say this when we have only opened an abscess, curetted it, and closed the abdominal cavity. Nor are we more confident of our success in removing the entire disease, and leaving the abdomen surgically safe, when we drain the abscess cavity through the abdominal incision.

For me, the only justifiable method of dealing with an ovarian abscess upon a conservative basis, is when it can be reached through the vagina, and without opening the peritoneal cavity. The objection to this operation is the strong probability that another operation will be required to remove the seat of disease, and that therefore it is not in itself curative.

I wish here to emphasize the distinction between the vaginal operation for pelvic suppuration, and the same route for reaching ovarian suppuration. In the former we have no organ to remove, and the opening of the abscess cavity, with its drainage, will effect a cure; but in the latter we have to deal with an organ that has in all probabilty become infected in all its parts, and must be removed *en masse*, to insure recovery.

My plea is for the cure of the patient who places her life and her health in our hands, and against the surgery that would make her an example of our brilliant manipulative skill.

Another aspect of the subject presents itself for consideration. An ovary that has become the seat of inflammation and suppuration is thus disqualified from further usefulness. Ovulation, if it takes place, is imperfect, and is a bar to healthy impregnation. The same is true of the follicular cystic degenerati of the ovary. In this condition the Graffian follicles are the seat of disease, and being diseased, are unable to perform their function. In like manner an adherent or occluded Fallopian tube is a damaged organ, and cannot be functionally restored by separating adhesions that will form again, or by performing section, which results in cicatricial tissue.

Let us now turn to the practical side of the conservative surgery of the uterine appendages. This is a question of statistics, and has to do with the results of treatment. My personal experience in trying to save a portion of the ovary, and in attempting to restore the calibre of the Fallopian tube, has been disappointing. The same is true, though in a lesser degree, of the benefits which I have obtained from breaking up adhesions of the uterine appendages, unless I have followed such manipulations by means directed towards keeping the surfaces apart until inflammatory exudate has covered the surfaces, and forms a protective envelope against their reuniting.

The possibility of saving an organ, of curing its disease without destroying it, will always be attractive to the conscientious surgeon, and he will ever suffer a degree of chagrin and professional mortification when he realizes that he is defeated in his efforts to restore functional activity; but let us take our defeat gracefully, and acknowledge when we are baffled.

In common with other surgeons, my first object has always been to save an organ rather than to remove it, and I hailed with pleasure, though it must be confessed with misgivings, the suggestions of prominent members of our profession to treat certain diseases of the uterine appendages, hitherto believed to be amenable to total ablation only, by partial removal, and by simply separating the results of inflammation; but as I have said, my success has not been of such a nature as to encourage me to place much confidence in that method of curing the diseases of the appendages that come under my treatment. I have several times thought to remove the apparent seat of disease, and brought the ovary out of the abdomen for that purpose, but upon closer examination have found the entire organ so far involved in the process that I have felt obliged to perform ablation. I have also made the attempt to preserve a Fallopian tube, and have restored its calibre when it has been closed by inflammation, but in every instance the object of the operation has been defeated by subsequent closure of the canal, as shown at a second operation. My statistics show that my conservative operations on the uterine appendages have almost invariably necessitated secondary opening of the abdomen and removal of the diseased ovary or tube.

I realize that I am open to the criticism of not having carefully selected my cases, and that therefore my experience is not applicable to the cases in which conservative surgery is curative. But this is a question difficult to settle, and after all, accumulation of evidence is the data upon which we must go. The general run of cases is about the same for each surgeon, and it may be assumed that their experiences are very similar.

Another aspect of this question which strengthens my disbelief in the incomplete surgery of the uterine appendages is the number of cases so operated by other surgeons, that have come to me, later, for treatment. The history of these cases when presenting, is of damaged appendages, with pain, disturbance of the menstrual function, sterility, and all the symptoms that lead one to examine the pelvic organs. The record of the operations is, either removal of a portion of a cystic ovary, opening and drainage of abscesses, separation of adhesions, or section of the Fallopian tube. In other words, conditions and manipulations that in my judgment speak for more radical operations. I have operated on many such cases, and I have invariably found a continuation of the disease for which the original operation was performed. The cystic degeneration was not arrested by the removal of a few cysts; the process of suppuration was not stayed by opening one or many collections of pus; the adhesions formed again, and the Fallopian tube again became occluded. I am thus frequently called upon to make good the incomplete work of others, work done in perfect honesty, but I think according to mistaken principles.

Still another aspect presents itself for consideration. We have all observed the strong tendency of the second ovary to become affected after one is diseased, and so well recognized is this fact that we frequently advance as an argument in favor of an operation the possibility of saving one ovary if diseased one is removed, and the probability that this result cannot be attained, if the operation is too long delayed. So truly has this become a canon in abdominal surgery that some operators of large experience take the position that it is always wise to

remove both ovaries when one is diseased, that if this is not done a second operation will be necessary to effect a cure. I am not prepared to go quite as far as this, for I believe that one ovary may become diseased, and so continue for a variable length of time before the other sympathizes with it, but I do take the position that when a uterine appendage is sufficiently diseased to necessitate opening the abdomen for its treatment, that is, when it is beyond the treatment with medicine or local applications, it is too far degenerated to be cured by removing a portion of the organ, and that if we look to a cure of our patient we must perform a complete operation.

DELIRIUM TREMENS IN MODERATE CONSUMERS OF ALCOHOL.

By Frank H. Pritchard, M.D., Monroeville, O.

IN the July number of The Medical Times Dr. R. Elmergreen of Milwaukee, has reported four interesting cases of delirium tremens in moderate consumers of alcohol which are very instructive, and particularly with regard to their pathology. The writer has done us a service in calling our attention to this peculiar variety of delirium, for one may meet with them in practice and they may be very embarassing and treat one to unpleasant surprises. He seems to think that he has found a form of delirum tremens that stands apart from the usual one and which has something more or less mysterious about it. I must admit that the general text-books do not give much attention to this peculiar variety and that it certainly is confusing. Osler, for example, does not offer much light on it.

My view of these cases is that they are usually uræmic and that through the moderate consumption of alcohol, and especially of beer, the kidneys are undergoing parenchymatous degeneration, possibly without any external signs or evidence of these lesions, and with the oncoming of a "congestive attack," as the English call it, or an acute congestion, or better said, an acute nephritis, in an already damaged kidney, the delirium is precipitated, the degenerated organs are unequal to the strain, and going from bad to worse there is a general "smash-up" and with a rapidly rising temperature which just before death, in the pre-agonic stage, reaches a grade at the top of the thermometer.

It will be noticed that in his first case there is a history of poor appetite, coated tongue and morning nausea, with gastric distress three months preceding his death, all symptoms certainly demanding an examination of the urine, and probably due to renal insufficiency and parenchymatous degeneration. His second case offered signs of an oncoming congestive attack from the shock of seeing his comrade mangled.

Moderate consumption of alcohol will sooner or later lead to degenerative changes in the kidneys, several writers to the contrary notwithstanding, and that either directly or indirectly. Professor A. Villard, of Marseilles—"Lecons sur l'Alcoolisme," p. 72, 1892—in speaking of the effect of this poison on the kidneys says: "In whatever way that it be brought about, whether gradually or by repeated congestions, chronic nephritis is the usual fate of the steady drinker. Anatomically, you will find in general the small, granular and sclerosed kidney . . . and indeed, the kidney of alcoholics is looked upon as the type of interstitial nephritis of arterial origin . . . with secondary malnutrition of the exciting cells and consequent degeneration. . . . In some cases you will discover instead of the small and contracted kidney a kidney but little or not at all reduced in volume, which on section offers brown or raspberry colored areas on a pale background—*c'est le rein tacheté ou bigarré*. In these kidneys the fundamental lesion is still a sclerosis, with areas of congestion or even hemorrhage. Do not forget that the fatty degeneration of which I spoke as occurring in the liver may be met with in the kidney, concurring with cirrhosis—the small granulo-fatty kidney. At times the fatty degeneration will be found as existing alone and particularly in beer-drinkers. The kidney is then soft, of a white and lardaceous appearance; on section shining and greasy. The line of demarcation between the two portions is ill-defined. Thus you may meet with cases of moderate drinkers where uræmia suddenly sets in under various circumstances and suddenly puts an end to life, whose other organs seem to bear the fatal poisoning well."

So much for these statements. In 1898, in Nos. 8, 9 and 10, of the Danish medical journal, *Hospitalstidende*, Dr. Poul Hertz published a very interesting and instructive article on the "Pathogenesis of Delirium Tremens," which throws light on Dr. Elmergreen's cases. With admirable, patient and scientific thoroughness, which is characteristic of the Scandinavian physicians, he investigated for several months the cases of delirium tremens coming into the General Hospital in Copenhagen. He especially examined the urine of these patients before the delirium set in when possible, as well as during and after. It was investigated immediately after entering, several times a day, microscopically and as to specific gravity, quantity, etc. He had 124 cases of undoubted delirium tremens which he divides into groups. The gravest were those where there was a severe and uncomplicated attack, with convulsions—nine cases—all with albuminuria which was noted in the prodromal stage, in goodly quantities and which was not a consequence of the convulsions or post-epileptic, but where it was noticed before the convulsions which set in. Here, in this group, the urine was dark, reddish brown, a little turbid, cloudy, and sometimes of a slimy consistence. The specific gravity was high, 1,020-1,035, the quantity greatly diminished, 100, 150 ccms. daily, or even complete anuria, for a day. There were casts of different kinds, renal epithelium, red and white blood corpuscles; these elements were most numerous at the height of the attack or immediately after. After the patient became quiet they disappeared.

The next group was of those with pronounced and well-developed delirium, without convulsions, who entered in the prodromal stage. There was albuminuria in them all, with renal epithelium and cylindroids, and in one fatal case a decided organic lesion was found post-mortem.

In another group which came under observation with delirium, without convulsions and during the

delirious stage, in all there was albuminuria, in varying degrees from a mere trace to goodly quantities. The state of the urine was less abnormal than in those with convulsive phenomena, which agrees with the view that those cases with convulsions are the most serious.

The series of symptoms which are set forth as characteristic of latent nephritis have a striking similarity with those of the prodromal stage of delirium tremens. In both states there are both gastric and intestinal symptoms, cerebral and nervous phenomena, and, indeed, even nose-bleed is an accessory symptom in the not unusual hemorrhagic symptoms which may be noted among the prodromes of Hertz's cases: hæmatemesis, epistaxis, bleeding from the gums and hæmaturia. Dieulafoy calls this state "petite urémie" and even without this hint one is led to look upon a condition which often shows itself with headache, and nearly always with nausea and vomiting or slight gastro-intestinal disturbances, together with renal troubles, as allied to uræmia. Then it is but a step to regard the whole delirium, together with the convulsions, as a sort of uræmia. Such a parallelism is not difficult to demonstrate. Convulsions, that typical uræmic symptom, appear in grave forms of uræmia as well as in severe cases of delirium tremens; the vomiting never continues into the stage where the severe cerebral symptoms appear, as in delirium tremens. The delirium of uræmia is well known. Toulouse has made it the object of a thorough study—"Les Troubles Méntaux de L'Urémie." *Gazette des Hospitaux No. 70, 1894*—and he characterizes it as an acute hallucinatory delirium. Delirium tremens is exactly the same form of psychosis. Indeed, one French writer, Lecorché, asserts that uræmic delirium may be still and quiet or violent, and easily confounded with delirium from other causes, as for example, that of alcoholism. That uræmic delirium more frequently is joined with convulsive than with comatose forms of uræmia also points to a relation with delirium tremens.

The temperature in delirium tremens has been difficult to understand, but possibly it is more easily comprehended if one remember that it depends upon similar causes to that in uræmia. Hughes and Carter—"A Clinical and Experimental Study of Uræmia,"*American Journal of the Medical Sciences,* Vol. 108, 1894—claim that the temperature in uræmia is no constant nor pronounced symptom. It may be either above, below or at the normal. It is more frequently observed above in parenchymatous nephritis. Stengel—"Fever in Nephritis," *American Journal of the Medical Sciences,* Vol. 110, 1895—mentions that the temperature may rise with coma or delirium or convulsions. Dethlefsen has found rises of temperature after convulsions in 42 per cent. of his cases.

Finally, Hughes and Carter have said that uræmia may set in without the urine being albuminous and yet the necropsy reveal a well-developed renal disease. This must be comparatively rare, though I have noted the albumen in some renal affections to vanish at times, and to be plentiful at others. Therefore the following conclusion may be drawn: if insufficiency of the renal functions during that state which is called uræmia, is able to produce hallucinatory confusion, therefore it is not illogical to assume that the hallucinatory confusion which is called delirium tremens and which always has other symptoms in common with uræmia, is dependent upon an "insufficiency of the renal functions" when there are always signs of disturbed kidney function associated with it.

Hertz concludes his lengthy and very instructive article as follows: As a result of my investigations it may be concluded that:

1. A renal disturbance is a constant accompaniment of uncomplicated delirium tremens.

2. That the relation of time between the renal disturbance and the appearance of the delirium shows that the renal disease is primary and the delirium secondary.

3. That the anatomical base of the renal disturbance is an acute nephritis, which as a rule probably develops without any preceding chronic nephritis.

4. That the course of the renal disturbance follows so closely, step by step, with the delirium that there is good ground for assuming that there is a genetic connection between the two phenomena.

5. That there are so many similar points in the two states which are notoriously brought about by an insufficiency of the renal functions (uræmia), and delirium tremens, that there is reason to assume that *the delirium is an acute auto intoxication-psychosis as a consequence of the insufficient kidney function, which is due to the acute nephritis.*

6. That the peculiar form that this psychosis takes on is dependent upon its developing in chronic alcoholics.

Finally, 7. That there is a probability that delirium tremens in pneumonia is dependent not on the pneumo-toxines directly, but the always present renal lesion.

I have examined the urine of quite a number of beer and whiskey drinkers and I have found that even when they were in fair condition yet their kidneys were not normal, for the urine would be thin, with a slight trace of albumen, a few renal epithelia and an occasional cast, if they were a little under the normal. If they would take cold the quantity of albumen would increase, hyaline casts be thrown off, and symptoms of renal inadequacy set in. On leaving off the habit the urine would quickly or slowly return to the normal, according to the amount of renal mischief already done; of course if decided alterations had already occurred then much less restoration would follow. In short, I doubt whether the kidneys in cases of delirium tremens were so normal before the attack and whether the renal insufficiency had developed on such virgin soil as Hertz would assume. He had no means of examining the urine of these patients weeks before they entered. His evidence is somewhat contradictory, for on page 239 he asserts that in about one-third of the cases he had found pre-existing symptoms of a chronic nephritis, in others stethoscopic and physical signs of a hypertrophy of the heart. He assumes that the delirium develops not with a background of a chronic renal disease, but as an actual acute process. I would not attempt to dispute him, but I have gained the impression that alcoholics have kidneys of lesser resistance. Dr. Ellmergreen tells me nothing about the urine in his cases. Possibly he might have had more light had he examined the urine carefully.

APPENDICITIS MAXIMS.

By M. O. Terry, M.D., Utica, N. Y.
Ex-Surgeon-General State New York.

REMEMBER that constipation and irregularity of the bowels are the factors to be considered, and that diarrhœa is simply an effort on the part of nature to relieve impaction, congestion and inflammation.

2. That cathartic medicine in some form should be administered at once, but that half an ounce of castor oil and same quantity of sweet oil is to be preferred, followed immediately by a glass of hot water. which dose is to be repeated in three hours unless a thorough evacuation has been induced.

3. That the condition of the bowels desired is a stool free from hard lumps and yellow in character.

4. That morphine or opiates in any form should *never* be given in any state of the difficulty, as it smothers symptoms and arrests the peristalsis of the bowels, a condition found in impaction, which at times nature tries to relieve by diarrhœa.

5. That for *pain* speedy relief is obtained by repeated hot flaxseed poultices covered with hot sweet oil or applied to the abdomen before the poultice. Also that enemas of half a pint of sweet oil followed by soap or soda water in large quantities are useful.

6. That in sharp attacks the high or colon enema should be given, and at times the patients should be placed in the Trendelenburg position.

7. That glycerine and water, in the proportion of 1 to 4, is to be used at times to dissolve impaction.

8. That food in acute attacks should be omitted and only water allowed and that freely. Later, oat meal gruel strained, milk peptonized, mutton or chicken broth with strained rice gruel.

9. All of the above suggestions should be carried out as indicated, vigorously, systematically, and perseveringly.

10. The remedies used throughout as indicated, are: Aconite, veratrum vir., belladonna, bryonia, phenacetine, calomel and soda tablets, pulsatilla, and arsenicum. Tinctures are given in doses graded to the inflammation and idiosyncracy of the patient in hand.

11. The calomel is given for two purposes in conjunction with the soda: (*a*) For its cathartic effect when the castor oil cannot be taken. It will be necessary in these cases to give from two and a half grains with three times the amount of soda, followed by a glass of hot water, to five and occasionally ten grains.

12. (*b*) For chronic recurrent appendicitis with marked thickening, and plastic exudate into the surrounding tissues.

13. If you ask when to operate, I advise following the indicated line of rational surgery. If the quick pulse and pain does not subside speedily, or show improvement within a few hours, it will be good surgery to operate—if the patient will allow you to do so. If they do not, continue the "Oil Treatment" *vigorously.*

14. The easily diagnosed pus case requires speedy surgical attention.

15. That half an ounce of sweet oil followed by a glass of hot water, taken half an hour before meals, should be continued until pain or soreness ceases, which may be three months. As improvement ensues take two doses a day, and finally one.

SOLD HIS AFTER-BIRTH.

A medical student was asked to take a Sunday-school class, which after some protest he consented to do. He got on very well with the questioning, but when it came to imparting knowledge he was a little lacking. He managed Abraham, Isaac and Jacob very well, but when he explained that Esau was a man who sold his after-birth for a bottle of potash the vicar hinted that it was time he was home and had his tea.

A NURSE'S KNOWLEDGE.

The advantages accruing to the modern trained nurse with a familiarity with technical medical terms are shown by the recent remark of a nurse in attendance upon a man suffering from vesical retention. The patient had for some days been obliged to make several futile attempts in each case before accomplishing the function of micturition. Finally relief came, and the nurse saluted the doctor at his morning visit with the cheerful words, "He passed water to-day *by the first intention.*"—*Boston Medical and Surgical Journal.*

RAW COW'S MILK FOR INFANT FEEDING.

Dr. Edward F. Brush says that, while boiled milk is practically dead as well as sterile, raw milk retains a certain degree of vitality which is inherent and useful. For this reason he looked upon clean, raw milk, devoid of pathogenic germs, as the best substitute for breast milk.—*Pediatrics.*

The Etiology of Trachoma.—Dr. E. F. Snydacher, in the *Journal of the American Medical Association* for February 4, *(Med. Rev. of Revs.)*, publishes the results of some original investigations in the isolation of the micro-organism causing trachoma. He has found in the tissues and secretions of trachomatous eyes a diplococous from which he has obtained pure cultures on various media, and with which he has produced the disease by inoculation in the human subject, recovering the same diplococcus from the tissues of that subject, thus proving the etiology of the disease and the identity of the micro-organism. This diplococcus is invariably found in the trachoma nodules, but not always, or even frequently, so it is stated, in the secretions, although probably present at times in the secretion of every trachomatous eye. The doctor has made some further studies with a view of producing an efficient trachoma antitoxin, and believes the local disease an ideal one for the application of such a remedy. As to the clinical significance of this work, he remarks: "In the early stages of trachoma, and frequently even after the lapse of some time, it is often impossible by means of the methods now employed to state with certainty whether the case before us is one of that disease or not. Can a diagnosis be made with absolute positiveness? Unquestionably yes. If one can find within the secretions or in the contents of the expressed follicles an organism such as I have described, he may with absolute certainty call the disease trachoma; furthermore, he must use every precaution to prevent the patient from infecting others, for that organism, under favorable circumstances, will certainly cause the disease in others, no matter how mild a form of the disease the patient himself may exhibit. Is this method of diagnosis sufficiently reliable—can the organism be found in enough cases to render it valuable? Again, undoubtedly yes. Where one suspects trachoma there are almost invariably enlarged follicles. Squeeze out one of these follicles, smear its contents on a cover-glass, fix them in the flame, stain them by Gram's method, and if a capsulated diplococcus is present the case is undoubtedly trachoma; if it is not present, the case is in all probability not trachoma."

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Great men are they, who see that spiritual is stronger than any material force; that thoughts rule the world.

THE PROGRESS OF CULTURE.

TELEPATHY.

THE experiments of Signor Marconi and others in wireless telegraphy have demonstrated the fact that by the use of an apparatus designed for the purpose messages may be sent through space for great distances without any other known connection than the vibration of the atoms in the ether which fills the universe. We have ample reasons, from the deductions of science, to assume that an ethereal medium pervades all space, the molecules of which are acted upon by forces by which minute tremors or waves of energy are sent from the generating to the receiving stations. The entire solar system is alive. All is motion. Every atom is an expression of life. The atom and its motion are inseparable. It is true these atoms are so minute, so invisible to any powers science has yet discovered that their existence can only be demonstrated by the effect produced. By this we know they are potent with life and energy, and the seed of uncreated worlds. These vibrating atoms are the carriers of the subtle forces of nature from world to world, and the mediums of expression of the Divine will.

Vibration, as understood in connection with the finer forces of nature, must not be confounded with oscillation, like the slow moving of a pendulum, which is produced by the action of gravity on the whole mass, but it is that swift reproduction proceeding from the reciprocal action of the molecules on each other when their state of equilibrium is disturbed. The contraction of the sun and fixed stars produce heat, and this radiation is propelled by the vibration of ethereal atoms in tremors or waves until it is caught up with its precious freight of life and energy by even the most remote planets in the solar system.

The air under the pressure of 600 atmospheres becomes a fluid, having radiated its heat in the compression or contraction until it has reached the zero of cold, between three and four hundred degrees below the zero of Fahrenheit.

In utilizing the ether with the great tenuity of its atoms we are getting very near the finer forces of nature, and that essence of life which blends the spiritual with the material world. Before the X-ray the opaque human body becomes transparent, and the bony frame within is distinctly visible. If atoms are so attenuated that they penetrate through solid substances so that they become visible to the human eye, where are we to draw the line between spirit and material forces, or differentiate between them?

Marconi has shown that a small electric battery can send waves of energy and intelligence through the ethereal atoms of space for a greater or less distance, according to the elevation, which may be caught up by a sensitive mechanical receiver and its code of signals recorded and interpreted. In the battery a small amount of material is decomposed to produce the electric current. The brain is, to a certain extent, a battery, and the ganglions of the great sympathetic nerve relay batteries to insure a continuous supply of the nervous energy generated in a great measure by the brain. This battery, with its relays, by the nourishment supplied to the body, decomposing its own material thus supplied, is perpetually in action. Thought is, to a certain extent, the outcome of cerebral action, the same as electricity is a force evolved from the decomposition of elementary substances. Thought then, is an entity, a force, something which can travel through space and be caught up by a receiver, however distant, which is in tune with its vibrations.

Have we not here the keynote of brain telepathy? An entity, a force proceeding from the brain, directed by the will and leaving an impression in some other brain which may be brought in touch by the will power of the sender. Everyone can recall incidents in personal experience when thought of a most important character has been evidently communicated from mind to mind, even at a great distance. These incidents are of too frequent occurrence to be classed as coincidences. In the light of recent scientific discoveries we are beginning to recognize in these facts the working of a subtle force in

strict accordance with natural law, and there is no doubt the natural laws of the physical world extend into and form a part of those of the spiritual world. They are not so widely separated as we have supposed.

A few days ago a gentleman gave us an instance of what he admitted must be brain telepathy, although he had before this incident ridiculed the idea. His wife in leaving their city home for a distant locality, had locked the bedroom door and placed the key where after a most diligent search he was unable to find it. He tried to pick the lock, but failed, and then started on his search again, but with no better success. At length, without any apparent cause, acting on a sudden impulse, he went to a place where he had never thought of looking and found the key. The next day the letters between husband and wife passed each other on the cars, telling the story of the writer. The husband's had in it a tone of reproach at the carelessness which had given him so much trouble, while the wife's seemed to ring with a note of triumph that her thought, sent with all the force of her will, reached her husband's brain with the intelligence of precisely where the key was placed. Was this a coincidence, or is it more easily explained in the light of wireless telegraphy as the outcome of a natural law? Can a brain action take place, if thought is an entity, without creating a wave or undulation in the ether, and if so, why may not that thought fall upon some sensitive substance, leaving an impression there for good, or one partly or distinctly formed, according to the force of the brain action? Do we not see in the light of this law why a good man is a perpetual benediction in the community in which he lives, and a bad man a perpetual curse? Each brain is the center of undulations transmitted from it in all directions. The one is full of harmony, and its seed ripens in a rich harvest of good. The other, full of evil passions, sows the seeds of jealousy, hate and discord, and opens wide the pathway of crime.

Remember we are dealing with subtle forces which touch the very fountains of creative life, and whose wondrous power as we ascend to the higher and still higher plane of life will be under the control of man as part of God. Then, and not till then, will man be king and God regnant, and the crowning glory of creative power accomplished.

PROFESSOR OR DOCTOR?

SOME of our contemporaries have devoted considerable space to discussing—and we might also say breeding—an antagonism between the general practitioner and the didactic physician. The hospital evil, the dispensary abuse, the overcrowding of the profession, the diminution of professional incomes, the conduct of medical societies, all serve as introductions on the part of some writers to a tirade against medical teachers. To a certain degree this sentiment rests on a substantial basis, but the fault lies ultimately with the profession at large. A good sized city, supplied with colleges up to the degree of tolerance of the burden by ambitious schemers, still has a majority of its medical profession outside of college bonds. According to recent statistics the profession of the whole country has not more than a twentieth of its number connected, however humbly, with medical schools.. If, then, the college rings, as they are often called, are the serious menace to general professional welfare that many claim, some good reason exists for the control of the majority by a small minority.

Some evils certainly do exist in regard to the organization of colleges. In the first place, more are chartered than are needed for the population and students are tolled into the profession to their own detriment and that of physicians already in practice. But this evil is essentially the fault of the non-didactic profession, for the redundant schools were organized almost without exception by men who were not in colleges and who were not satisfied to attend to their practice and to stake their professional reputation on their ability as practicing physicians, but must gain the specious advantage of being a professor. Not all of the newer colleges, however, are of this stamp. Not a few have been founded with the noble purpose of affording facilities for instruction which older rivals could not or would not provide. The increase of students beyond the demand for practitioners is, to some extent, being counteracted by natural laws of supply and demand, partly also, by restrictions on admission and licensing. This last point affords a convenient and reliable test of the professor. Has he joined with the better element of the profession to evoke legislation for the uplifting of that profession, or has he shown the purely commercial spirit of getting all the students possible, regardless of their ability and perhaps believing that the poorer the average physician he helps turn out, the more consultations he will have? The conflict on this issue is not between the general profession and the college, but between the honorable and intelligent physician on the one hand and the man who desires, for himself or for others, a low grade of equipment.

The hospital and dispensary system has, beyond question, been used to the unfair advantage of the college and to the detriment, not only of the ordinary physician, but of popular self respect. But such evils are a part of human nature. The cruelest law in nature is "To him that hath shall be given,"

and the licensing of a man to practice medicine does not change his nature nor exempt him from natural laws. Let there be a determined effort throughout the country against the abuse of charity and against the use of money obtained by taxation or by public donation for selfish ends by a hospital staff, and there is only one way in which the matter can ultimately be decided. The college naturally and properly wishes clinical advantages for its students, but this claim could not stand before the verdict of popular opinion if the general profession pleaded half as earnestly against the injustice of limiting a man's choice of physician because he is poor or of giving one doctor's patients free board and nursing and refusing the same charity to the patients of another physician. But, under present conditions, we do not see that the college professors are more to blame for using their advantages than is any man for maintaining a state of living which is superior to some one else's, and which he has secured by accidental good fortune.

If the professor occupies a position of favor, if he is called on more frequently for consultation, it is either because he deserves the honor and substantial reward or the general medical profession is at fault. So far as we know, a lawyer, an electrician, a druggist, is judged in his professional work by that work and not on account of teaching students the rudiments of his art. If the case is different in the medical profession, the responsibility lies with the profession as a whole. The faculty of a college is often said to be a ring, a mutual admiration society, an exchange of consultations. But we may well question whether such criticism is not prompted by the same jealousy which, in some localities, puts the different physicians in an unfriendly attitude toward one another. If the professors are accused of holding too frequent consultations, might they not retaliate by saying that the reluctance manifested by many practitioners against sharing a case is equally dishonest and more disastrous to the patient. The line ought to be drawn, not between professor and general practitioner, but between liberal and honorable men on the one hand, and on the other those who manifest their commercial spirit by "passing patients around," or by denying them needed attention in difficult cases, through a desire to monopolize them and a disinclination to admit that anyone else is capable of practicing medicine.

There is one simple solution of the whole problem, that can hurt no one but those who deserve condemnation and punishment. Drop the word and thought of professor outside of college walls. Call consultants according to practical ability, not didactic appointment. To the patient, either ignore the latter consideration, or, if it is brought up by the laity, explain that in medicine as elsewhere, a good teacher may or may not be a good practical man and that the professorship is an external. Judge yourself and your associates according to ability; do not cringe to another because he is a professor, do not become his catspaw in the hope that you may sometime have the same title; remember that something gained or held by dishonorable practices is not an honor; remember, too, that there is no acknowledgment of superiority quite so complete as the ill-natured utterances of jealousy and envy. If these rules could be carried out so literally that young men would not act as touts for their former instructors, that a professor would draw just the same audience at a medical meeting that he would without his professorship, if physicians were more interested in practicing medicine than in anything else, the whole problem would be solved. Remove from the professor the unmerited favor that the general practitioner has bestowed and the latter will cease to complain, while the honest man—and there are many such—who is engaged in medical teaching as well as medical practice, will be only too glad to stand on his own abilities rather than on a presumption.

A. L. B.

AN HONOR CONFERRED.

I AM glad to quote from the *Herald* its report of a well deserved honor conferred on our friend and editorial associate, Dr. Guernsey, and feel that in honoring him, the college has honored itself.

A. K. H.

"The Rev. Thomas E. Murphy, S. J., President of the College of St. Francis Xavier, in announcing the name of Dr. Egbert Guernsey for the degree of LL.D., said: "It gives us pleasure to confer one of the most important honors of the college upon a gentleman standing so high in the ranks of literature and science and in the charities of the city. A Regent of the New York State University, in speaking of him, said that the college which conferred a degree upon Egbert Guernsey would add one of the brightest jewels to its crown."

At the banquet of the alumni, on the following evening, Father Murphy said, in calling upon Dr. Guernsey, that the eminent physician, so widely known in his profession, graduated in the New York University in 1846, one year before the organization of the College of St. Francis Xavier.

Dr. Guernsey, in rising to reply, said: "There is an old adage in New England, where my boyhood was passed, that 'little boys should be seen and not heard.' My stature and gray hairs might indicate my being far from a 'little boy,' but you will remember that my birth into this society dates only from last evening, so that I am its youngest member. It would be presumptuous in me to address my seniors,

but I may be permitted to express the pride I feel in standing this evening in the ranks of a society which has done so much for science and humanity. In every great center of thought, in every educational institution, in every line of progress throughout the world, the teachings of that grand organization, established by St. Ignatius in 1540, have been the central idea and main spring of energetic, enduring action. That idea was to cultivate the intellect, training it to the close analysis of thought and the logic of facts derived from the most thorough judicial investigation. This is the aim of the ever-advancing education of the world, and it has been built upon the foundation laid by the Jesuit Fathers."

THE BUBONIC PLAGUE NOT CONTAGIOUS.

AN official report to the State Department from Alexandria, Egypt, expresses the opinion that the plague is not propagated by direct contact. There is no report of repeated cases in the same house. Immediately upon the sending to the hospital of individuals suspected to have the plague, all those who have been allowed to approach them, and especially those who have inhabited the same houses, are sent to a lazaretto outside the city. No suspected case has broken out among those who are known to have been in direct contact with individuals now down with the disease.

A SEVERE PENALTY.

THERE is a very unhappy woman in this city at the present time. She cannot scold her husband with anything like the vigor which she thinks the case demands, and which other women can do with impunity, without dislocating her jaw. This has occurred twenty times during the last six weeks. The poor woman says her husband caused the first dislocation. He came home late from lodge and she lectured him. He "talked back," and became excited. She talked long and rapidly. Suddenly she stopped, and a cry of pain escaped her lips. Her jaw had become dislocated, and her efforts to reset it were unsuccessful.

In the morning she went to the hospital. The doctor found that the ligaments of the jaw were too long and supple and permitted the joint at the top of the cheek to work out of place. He injected iodine into the muscle of the joint to harden it and cause the ligaments to contract. Then he replaced the jaw and fastened a bandage around the woman's head to keep it in place.

She returned in a few days for treatment, and apparently the jaw was all right. The following week she attended an entertainment and laughed so heartily that her jaw was again dislocated. She returned to the hospital, where the doctor set the jaw in place and advised her to avoid every provocation to laugh, but while walking with one of her neighbors she forgot the surgeon's advice and laughed at the antics of a boy, and her jaw was thrown out of joint. Since then she has been a regular visitor at the hospital.

The doctor is now injecting a drop of carbolic acid into the joint, which he thinks will so harden the muscles as to remedy the difficulty, but in the meantime she will have to stop laughing or even scolding her husband.

THE LEPER COLONY ON MOLOKAI ISLAND.

THERE is no doubt but disease is affected very materially by climatic influences. Eczemas are more common and more severe in the moist atmosphere of the seacoast; leprosy is seldom seen, and certainly does not flourish, in the United States, but in Iceland, with its intense cold, and in Hawaii with its tropical warmth, it is so common and so much dreaded, that special locations have been appropriated to it, and the inmates shut off from contact with the world. In Hawaii the leper settlement is located on the island of Molokai, and is called Kalaupapa, "The Living Tomb." This is the home of thirteen hundred human beings, where men, women and children tainted with leprosy are banished till death relieves them of their bondage of suffering.

While Molokai is one of the largest and most fertile of the Hawaiian isles, the narrow, lava covered strip of land devoted to this greatest pesthouse known to history is the most desolate and barren spot in all Hawaii. It is only a few hundred acres in extent, and the greater portion of the ground is strewn with sharp, flinty rocks of volcanic origin.

In the center of the settlement rises abruptly an extinct volcanic cone, shaped like a huge punch bowl and known to the natives as "the bottomless pit." Soundings have thus far failed to reveal its depth. On three sides the waves of the Pacific break and roar against its rock bound shore, while from the land side rises a perpendicular wall of black lava, which, mingling with the clouds at a height of 3,500 feet, shuts out from the hungry eyes of the lepers a vista of beautiful valleys and rolling hills clothed in the magnificent green of a tropical vegetation, with vast stretches of waving golden sugar cane and groves of lordly palms, and trees heavy with fruit and flowers.

Kalaupapa is a natural prison, from which there is no escape, and as if the very elements themselves had conspired with man to make the lot of the leper more unendurable, the great black wall of lava, which stretches far out into the Pacific, attracts immense quantities of moisture, which, forming into clouds, pours upon the poor huts and cottages of the

settlement an almost incessant deluge. At other times the fierce sun of the tropics is sending down his scorching rays.

Once a month a ship visits the island to carry supplies, but there is no wharf for a landing. The rough and dangerous passage from the ships to the shore is made in stout boats and then on planks from rock to rock.

A curious caprice of leprosy is that a healthy child may be born of leprous parents. If the child at twelve months shows no sign of the disease it is taken from the mother and sent to the retention home, conducted by the sisters in Honolulu. Here they are kept till the age of twenty-one, when, if they show no signs of the disease, they are set free. One of the strangest characteristics of this disease is, that in outward appearance it affects no two persons alike. One is stunted in stature, another grows to gigantic size; in one the skin is turned to an inky black, while another may be white, or red, or copper colored. A peculiar leonic expression of the face attaches itself to certain cases of leprosy. The head swells to almost twice its natural size; the skin assumes a reddish brown color and hangs in heavy folds about the face, while the eyes, small, bloodshot and receding, look like those of a beast of prey; the whole framed in a mass of tawny hair, takes on a faithful likeness of the lion—tired but patient under years of captivity.

Leprosy is one of the marvels of disease and the *bete noir* of our profession. It spares neither age, sex or color, and has completely baffled thus far the world of medical science. Even the manner in which it is contracted is a disputed question, and so called remedial agents are powerless in its presence. Possibly a bacillus may yet be discovered which will disclose the cause and indicate the remedy, but at present the stricken may look forward perhaps to years of life, but always a life of suffering, ever under the chill shadow of death.

NOT THE PLACE FOR PARTY POLITICS.

THE track of greed with its poisonous influence is seen in almost all political organizations. The coherent power of party is often centered in selfishness and made compact and strong by the personal influence brought to bear upon the masses by those who have individual ends to gain. The workers must be paid, and every position possible of honor or emolument is too apt to be utilized by the party in power for that purpose, in which fitness is a minor consideration. With many appointments in the gift of the State there are no direct emoluments connected in the way of dollars and cents, but there is an amount of patronage and increased public respect always flattering and desirable. Nowhere is the iron rule of party more seriously felt or made to work more positive harm, often rendering nugatory the very object intended, than in the management of asylums, prisons and reformatories under State laws. Abuses crop out, of so serious a character as to attract public attention; but before the remedy is applied the influence of the institution has been seriously impaired, if not entirely wrecked.

We are led to these remarks from the report of the daily papers that the Women's Reformatory at Hudson had been guilty of such serious abuses of power as to call for legislative investigation. This reformatory was organized during the administration of Governor Alonzo Cornell and was for years considered one of the most promising, useful and intelligently conducted institutions in the State. Two of the commissioners were women—Mrs. Egbert Guernsey and Mrs. Charles Spencer—and all were devoted heart and soul to their work. Mrs. Guernsey, secretary of the commission, corresponded with every women's reformatory in the world, and the best features of all were utilized. The result was an organization, so far as theory was concerned, as nearly perfect as could be made by human wisdom and experience. The theory was put in practice by placing at the head as superintendent Mrs. Sarah N. Coon, a woman of enthusiasm in her work, of rare executive ability, of sterling Christian character, who had thoroughly studied the great problem she was called upon to solve, the reformation of a class of her sex who were under the ban of the law, and bring them to the paths of virtue and usefulness. Selecting her executive staff with great wisdom, enjoying at all times the counsel and support of the commission, and specially aided by the female members, the institution grew day by day in usefulness and strength and was looked upon with proud satisfaction as having thoroughly accomplished the purpose of its organization. The women commissioners, who had really created the institution and had been reappointed by one governor after another, were dropped by Governor Flower, and men put in their place. Even this institution, in the full tide of success, must feel the grasp of party power and become a part of a political machine. A woman's reformatory was placed under the direct control of men, without a woman on the commission. Mrs. Coon at length resigned, the efficient executive staff was broken and scattered—and now the public demand, under the charge of flagrant abuses, an investigation of an institution whose early history was so full of promise and success. The story points its own moral.

THE health report of Havana for the last two weeks of July is the most favorable in the history of the city. There have been no yellow fever cases and the number of other contagious or infec-

tious diseases has been reduced to the minimum. The authorities will not say that a yellow fever epidemic is impossible here, but they are doing everything possible to avoid such an occurrence.

The officials are congratulating themselves on the success thus far attained, but are not relaxing their efforts to maintain a proper sanitary condition in every direction. Any cases of sickness about which there is any possible doubt are watched.

A GIANT MAGNET.

MAGNETS have long been used in removing pieces of steel from the eye, but they have been of small power and only successful when the steel was imbedded in the surface. A magnet so powerful that it will hold 250 pounds of steel clinging to it has recently been introduced into the Manhattan Eye and Ear Hospital. The first test of its powers was entirely successful, and saved an eye which otherwise would have been entirely lost, as it would have had to be removed. A sliver of steel from a rapidly revolving wheel had cut through the entire eye into the posterior chamber in the vitreous fluid, where no surgical instrument could reach it without destroying the eye. The magnet drew the steel from the opening it had made on going in, and is so powerful that it would draw a piece of steel through a human eye if no opening had been made. The sight of the eye will be saved.

The magnet is twenty-two inches long and fourteen inches in diameter. Between the poles, made of polished steel, the core of the magnet is wound with steel wire. It takes fifteen amperes and 110 volts to saturate these coils.

FRUIT-JUICES VS. BEEF BLOOD.

THE editor of *Modern Medicine*, in an article entitled "The Toxic Properties of Beef Tea," after enlarging upon the poisonous character of meat extracts, broth, bouillon, etc., and protesting against their employment "in cases of acute general toxemia, such as is present in typhoid pneumonia, diphtheria, and allied conditions," proposes a substitute as follows: "In the juices of fruits, nature has given us a source of energy in the most available and acceptable form. Fruit-juices of some sort may be recommended as preferable in every condition in which beef tea might be considered a desirable food. Properly prepared fruit-juices, preserved by sterilization without fermentation, actually present the body with stored energy in a form available for immediate use; whereas beef tea is simply a solution of products whose energy has been exhausted, and acts merely as an excitant, without really augmenting the bodily energy to any appreciable extent." This, no doubt, is perfectly true, so far as relates to "solutions of urea." But is Dr. Kellogg prepared to assert that fruit-juices of any sort would have "filled the bill" as completely as beef-blood appears to have done in the recent case of a celebrated author? Would their direct vitalizing action probably have been prompt and powerful enough to pull him through? Or are we to believe that the assumption of any such life-giving agency under the circumstances is simply delusive? Further, we would like to inquire why the discussion of the "Bovinine" question shrould be confined so entirely to advertisements and the pages of a semi-professional journal. Why should reputable physicians be any more afraid of publishing their experience with this particular product—under its commercial name or otherwise—than they are of advocating the claims of an antitoxin or any other article in which drug houses and manufacturers have an interest?

OXALURIA—ITS CLINICAL SIGNIFICANCE.

DR. ROBERT F. WILLIAMS, in a paper on this subject (*Maryland Med. Journal*, May 20, 1899), relates three cases in which the presence of calcium oxalate crystals in the urine was a marked symptom, and in two of which the diagnosis of serious organic disease had been made. In these two the removal of the oxalates caused a disappearance of the nephritic symptoms, so that the diagnosis of Bright's disease had to be abandoned. Both gave a history of previous nervous depression, and in both the nervous symptoms continued a considerable time after the disappearance of the oxalates. The remaining patient had been unwell for only three or four months; no albumen or casts were found associated with the oxalates, but there were constitutional symptoms simulating Bright's disease.

The author's general conclusions are as follows:

1. Whereas the appearance of oxalates in the urine—excluding their ingestion as foods—is due to a derangement of digestion or metabolism, this derangement probably has its cause in many cases in functional nervous irregularity, which may or may not be so great to produce general nervous symptoms, and if these be present they are not necessarily caused by the oxalates.

2. The condition causing the appearance of oxalates in the urine may produce symptoms closely simulating the constitutional symptoms of Bright's disease.

3. The excretion of oxalates by the kidney for a short while may occasion no local disturbance of that organ, but if continued may, by irritation, cause the appearance of albumen and casts with lessened urine, corresponding to the urinary symptoms of Bright's disease, and if unchecked may lead to per-

manent destruction of kidney tissue and true Bright's disease.

4. In all suspicious cases in which the nephritic symptoms are accompanied by the appearance of oxalates in quantity diagnosis should be held in abeyance and the oxaluria overcome by appropriate remedies (especially strong nitro-hydrochloric acid), to exclude this as a possible cause of the symptoms before making a positive diagnosis and pronouncing a necessarily hope-dispelling prognosis.

THE TRUE ANTIDOTE FOR CHRISTIAN SCIENCE.

THE *New York Medical Journal* remarked recently concerning an extraordinary condition of insensibility to pain, which has been produced in many instances by hypnotic suggestion: "These cases are enough to prove to any thinking person that whatever genuine results are attained by Christian Science methods are attributable simply and solely to suggestion." This view of the matter is undoubtedly correct. But if so, does it not follow inevitably that the right way to combat the new fanaticism is not to attempt crushing it by force of law—thus making martyrs of its leaders in the eyes of their dupes, and immensely strengthening their ascendancy—but to explain on every occasion, publicly and privately, the real nature of these "miracles," and demonstrate that educated physicians can and do perform them all, without the help of superstition, and without neglecting any other rational therapeutic measures that may be indicated? This would be snatching their only weapon from the hands of our foes, and turning it against themselves with a superior precision of aim which, combined with our other advantages, would make us invincible as American soldiers confronting the Filipnos. It is by tactics such as these that Homœopathy, after successfully resisting hard words and proscription for a whole generation, has been gradually compelled to abandon its militant attitude, and virtually merge its forces into those of the profession at large. Read Dr. Creed's narrative of his cures by hypnotic suggestion, in another part of this number, and judge whether the onset of Homœopathy successor in the field should not be similarly met.

THE BUBONIC PLAGUE.

THE *British Medical Journal* traces the progress of the plague in the different countries through which it has spread, and thinks there is great danger of its extending to Europe on account of its near proximity to the poison center. That there is but little danger from the disease extending to this country is seen from the fact that the period of incubation is generally from three to six days, so that if the disease is carried on a vessel from India, Egypt or any Mediterranean port it is bound to be developed by the time the vessel reaches here, and the necessary steps can be taken for quarantine.

The bubonic plague is essentially a zymotic disease. It is fostered by filth and famine, and in warm, moist climates may follow a period of privation, hardship and poor nourishment. The disease is practically unknown as an epidemic in civilized countries in recent times. In a land where a person is of clean habits and where sanitary precautions prevail, there is little fear of its becoming an epidemic. The disease affects the lymphatic glands and is accompanied by extreme exhaustion. When it becomes epidemic it is of an extremely malignant type. During an epidemic in Constanstinople in 542 A. D., 10,000 persons are said to have died in one day.

THE KISSING BUG.

DURING the past few months the papers have contained numerous accounts of a small bug, called the kissing bug, whose bite, usually upon the lip or jaw, is so poisonous as to produce severe swelling and intense pain, and is not unattended with danger. This bug is very common in Turkey, but it rarely attacks those who have not been eating onions or garlic; it seems to be less particular here. It has been found in Turkey that a little moistened tobacco, applied in the early stages, acts as an efficient antidote.

BIBLIOGRAPHICAL.

TREATISE ON HUMAN PHYSIOLOGY. For the use of Students and Practitioners of Medicine. By Henry C Chapman, M D, Professor of Institutes of Medicine and Medical Jurisprudence in the Jefferson Medical College of Philadelphia. New second edition, thoroughly revised. In one handsome octavo volume of 921 pages, with 595 engravings. Cloth, $4.25. net; leather, $5.25. net. Lea Brothers & Co., Philadelphia and New York.

The study of physiology, to be successful, absolutely requires a fair amount of anatomical knowledge. When the two subjects—anatomy and physiology, can be combined without distracting attention from the main one, or taking up undesirable space, such a work can be expected to accomplish its end.

The author of the work in question is to be congratulated, not only for meeting the demands mentioned, but also for the careful selection of up-to-date illustrations and methods, and for the manner in which the animal organs with their subdivisions or histological elements are discussed, accompanied by appropriate illustrations throughout.

Considering these points, and the great range of subjects necessary to the study, contained in such comparatively small limits, the book is an admirable one, and promising of good results. A. T. W.

CYCLOPÆDIA OF THE DISEASES OF CHILDREN, MEDICAL AND SURGICAL. The articles written especially for the work by American, British and Canadian authors. Vol. V. Edited by William A Edwards, M.D. Illustrated. Philadelphia: J. B. Lippincott Co.

This volume is a continuation of the work which was first published in four volumes in 1889, under the editorial charge of Keating and the present editor. The original plan, which was so acceptable to the profession, has been

carried out in the supplement. The advances in the pathology and etiology of pedriatics have been so great during the past ten years that a supplementary volume was necessary to cover the field of recent investigations. Among the triumphs of modern medical science serum therapy alone has created an epoch in therapeutics, placing in our hands an invaluable weapon against some of the most malignant forms of disease. The advances in the study of pedriatics during the past ten years have been so great and are so faithfully mirrored in this volume that even without the previous one it will form a most important addition to the medical library.

NERVOUS AND MENTAL DISEASES. By Archibald Church, M.D., and Frederick Peterson, M.D. Philadelphia: W. B. Saunders.

The authors claim that this work is simply a carefully prepared text-book in which the literature of neurology and psychiatry has been sifted and a digest made in the light of their own experience and practice in teaching. They have arranged their facts clearly, directly and concisely, presenting in an admirable manner two great subjects in a single volume. Each author is responsible for his own department—Dr. Church in neurology and Dr. Peterson in psychiatry.

OCULAR THERAPEUTICS. By F. W. Max Ohleman, M.D. Translated and edited by Charles A. Oliver, A.M., M.D. Philadelphia: P. Blakiston, Son & Co. Price, $1.75.

We have but very few works upon the remedial agents used in ophthalmology, exhaustivel,, such as this little volume discusses, or which so well supplies a guide, not so much to the oculist as the practising physician who in his daily work is called upon to treat simple conditions not requiring the skill of the surgeon. In no branch of therapeutics is the nature of the remedies and formulas to be employed so worthy of consideration as in ophthalmology. Many of the most useful of these have been gathered from text-books and the wide range of journalistic literature and incorporated in this volume. While in no sense of the word could this work be called a text-book, it will be, nevertheless, a most welcome addition to the medical library.

"THE ARCHIVES OF THE ROENTGEN RAY" still continues to reach us monthly. It is edited by Drs. W. S. Hedley and Sydney Rowland, and is published by the Rebman Company, London. W. B. Saunders, Philadelphia, American agent. It will be found of great interest to those who work in this department.

CHEMISTRY, GENERAL, MEDICAL AND PHARMACEUTICAL, INCLUDING THE CHEMISTRY OF THE U. S. PHARMACOPŒIA. By John Attfield, F.R.S. New sixteenth edition. In one royal 12mo. volume of 784 pages, with eighty-eight illustrations. Cloth, $2.50, net. Lea Brothers & Co., Philadelphia and New York.

For thirty-one years this book has been the guide of students in medicine and pharmacy throughout English speaking countries, for the reason that each succeeding edition has been brought fully up to date. Every page of the present edition shows the changes, additions and revisions made to present the to-day's status of its ever developing science.

"THE Story of the Captains" in the May *Century* marks the climax of that magazine's Spanish war series, giving, as it does, an account by every American commanding officer but one of the part played by his ship in the famous fight off Santiago, that resulted in the annihilation of Cervera's fleet. Captain Evans describes the doings of the "Iowa," Captain Taylor of the "Indiana," Captain (now Rear-Admiral) Philip of the "Texas," Captain Cook of the "Brooklyn," Captain Chadwick of the "New York," and Lieut.-Commander Wainwright of the "Gloucester," while Captain Clark, of the "Oregon," endorses Lieutenant Eberle's story of the "Oregon," and contributes a criticism of the Spanish admiral's strategy. The text of this novel group of first-hand accounts of one of the most remarkable naval battles ever fought is profusely illustrated with portraits, drawings and photographs, the latter from snapshots made from each one of the ships during the progress of the fight.

THE MINERAL WATERS OF THE UNITED STATES, AND THEIR THERAPEUTIC USES. With an Account of the Various Mineral Spring Localities, Means of Access, etc. By James K. Crook, A.M., M.D., Adjunct Professor of Clinical Medicine and Physical Diagnosis at the New York Post Graduate Medical School, etc. In one octavo volume of 580 pages. Cloth, $3.50, net. Lea Brothers & Co., Philadelphia and New York. 1899.

The medical profession and the laity will be equally interested in this, the first work which gives an authoritative and practical knowledge of the mineral waters of the United States. European nations have appreciated the health and wealth giving powers of their natural waters, but Americans have yet to learn that their own country contains the close counterparts of the best foreign springs, and that the American spas compare favorably with the most highly developed European resorts in charm of scenery and surroundings and in facilities for comfort.

A complete and discriminating work on this subject has accordingly been distinctly needed. In the preparation of this volume every source of information has been covered. The immense mass of material has been reduced to usable form, and the physician will probably find in this volume by far the most comprehensive and practical account of the subject which has ever been written. It includes all the principal springs in use to-day. Every variety of mineral water is represented, and the essential considerations indicating the therapeutic uses of such waters are clearly given. The prescription of such remedial agencies is often the last resort of the physician, a fact establishing their admitted superiority to drugs in properly selected cases. Still more efficacious would be the earlier and discriminating use of appropriate waters, and it is the object of this work to afford all knowledge necessary to this end.

DR. ED. LIESEGANG, of Düsseldorf, has recently published two articles on "Chemical Reactions of Gelatines," and "Electrolysis of Gelatines." They deal with the basic principles of a new science, which at first will probably be strongly opposed by the physiologists. At the inducement of a French publisher he has embodied the leading points of these papers in a single pamphlet of about fifty-five printed pages, of which the French edition will shortly appear.

UEBER SUBPHRENISCHE ABSCESSE, von Prof. Karl Maydl, Vorstand der boehm. chirurg. Klinik in Prag. Mit 8 Tafeln in Heliogravure und 12 Figuren im Texte. 357 pp. Vienna: Josef Safar, publisher. Price, 16 marks.

This excellent work is classic in this branch of medicine, the sub-phrenic abscesses. The writer, one of the brightest pupils of Albert, of Vienna, and whom the latter was fond of quoting, is the director of the Bohemian Surgical Clinic of Prague. The work is of value on account of the numerous clinical cases which are arranged throughout, and particularly in the latter portion. After a proper introduction with sections on the history, topography, pathological anatomy, diagnosis and prognosis he enters into the clinical portion, filled with cases of his own and numerous others from the literature of various nations. The course and treatment are presented and discussed in the two last chapters. The printer's work is well done, though it is bound in paper It will be of great service to those who would have something more than a superficial knowledge of internal medicine. F. H. P.

KLINISKA STUD'ER OEFVER ARTERIOSKLEROS, af J. G. Edgren, e. o. Professor i Medicin vid Karolinska Institutet. 363 pp. Wilhelm Billes, bokfoerlags aktiebolag, Stockholm, Sweden, 1897. (Clinical Studies on Arterio-Sclerosis, by Professor J. G. Edgren, Stockholm, Sweden. 363 pp. 1897.

Professor Edgren, of Stockholm, has done the profession a service in publishing this worthy work, in which he has gathered the results of his many years of clinical experience and labors on this subject, arterio-sclerosis, in its different forms and phases. Although certain localizations and groups of symptoms of this affection or state were known already in the last century, yet it remained for the past few decades to render us familiar with its protean clinical features, and taught us to recognize it with greater accuracy as a progressive and more or less diffuse disease of the arterial system. The writer here shows us that arterio-sclerosis, by the manifoldness of its phenom-

ena, which, by the more or less intense participation of single or groups of organs, by combination with very important and interesting morbid phenomena which progress and increase in exten. from year to year and by their vital importance impress the practitioner as one of the most serious types of disease that be meets with in practice. To-day we lay greater stress on the significance of these changes, but unfortunately in most text-books, though it is mentioned under kidney, heart and nervous diseases, yet as a whole it is not given that place in pathology as a morbid entity which it deserves.

Edgren's work, filled with his own observations and experiments, covers this gap. The practical analysis of 124 cases on which the work is based, is a masterpiece. These are divided into groups and an attempt made to set forth clinical types, senile, cardiac, renal, cerebral and presclerotic forms, with a section on the prognosis and concluding with the treatment. According to him syphilis is too much undervalued as an arterio-sclerosing factor. His work is interesting and entertaining, and worthy of many readers. The question arises in one's mind in reading it, How far the deleterious influence of renal and hepatic inadequacy, and particularly the former, play a part in these cases. We Americans are prone to look upon many such cases as of renal origin, and liable to be the early or middle stages of a granular kidney. There is also a German edition of this work. F. H. P.

A Practice of Medicine. By H. R. Arndt, M.D., Formerly Professor of Materia Medica and Therapeutics, and Clinical Professor of Nervous Diseases, University of Michigan, Ann Arbor, Mich., etc. Philadelphia. Boericke & Tafel. 1899. Pp. 1331. Octavo.

A one volume work to cover the subject of "Practice" at this day, must either be of enormous dimensions or else condensed to that of a hand book, and the latter is what the book before us must be considered. The author has succeeded in making an excellent text book for the class for which he writes. His text is clearly and concisely stated. The numerous typographical errors must be a great annoyance to the author, who is to be commiserated.

An Epitome of the History of Medicine. By Roswell Park, A.M., M.D., Professor of Surgery in the Medical Department of the University of Buffalo, etc. Based upon a course of lectures delivered in the University of Buffalo. Second Edition. Illustrated with portraits and other engravings. 6¼ x 9¼ inches. Pages xiv–370. Extra Cloth, $2.00 net. The F. A. Davis Co., publishers, Philadelphia.

That a second edition of a work of this character should be called for, must be a satisfaction to its author, as it shows a general interest in the subject by the professions which may result in a larger and more comprehensive volume. The present edition has a supplementary chapter on "Latrotheurgic Symbolism," which is considered germane to the general subject of the book.

The trifling errors which crept into the first edition have been corrected.

An Essay on the Nature and the Consequences of Anomalies of Refraction. By F. C. Donders, M.D., Late Professor of Physiology and Ophthalmology in the University of Utrecht. Revised and Edited by Charles A. Oliver, A.M. M.D., University of Pennsylvania. One of the Attending Surgeons to the Wills Eye Hospital; one of the Ophthalmic Surgeons to the Philadelphia Hospital, etc. With Portrait and other Illustrations. Philadelphia: P. Blackiston's Son & Co. 1899, pp. 80. Octavo. $1.25.

The object in translating this essay, the editor says, is to show how little can be changed in this unique *brochure* after thirty years of progress, the fundamental principles of the talented author being the standard of to-day.

The text is written in the form of aphorisms, and will bear study at intervals. The editor has thus shown his veneration and love for the author.

Here is a poser for the theologians. A little English girl remarked that she couldn't understand why Satan turned out so bad when he had no devil to put him up to it. A college of bishops could never frame a satisfactory explanation.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.*

SURGICAL SOCIETY.

Treatment of Tuberculosis of the Testicle.—M. Bazy—Theoretically, castration in tuberculosis of the testicle is the only rational operation, as it alone can present generalization of tuberculous processes; but practically it does not give the hoped-for results. M. Berger says he has never seen relapses occur in individuals who had been castrated. Testicular tuberculosis, as is well known, is proleiform. Two extreme points may be cited. There is a torpid form, spontaneously cured, and another of rapid development, and results obtained vary according to the evolution of the first or second form of the disease. Removal of the testicle does not prevent the appearance of the disease in other organs. Of two patients castrated on one side, a suppurative tubercular epididymitis of the opposite side was developed, and in another, one of whose testicles was removed, there ensued tubercular cystitis and tuberculosis of the remaining testicle. Unilateral castration is not only powerless to preserve the other testicle, but it has the disadvantage of taking away an internal secreting gland, to the great detriment of the organism physically and morally. The cure of testicular tuberculosis can be obtained by operations less radical than castration. The following fact proves this, evidently: A patient was affected with a tubercular epididymitis; general condition, bad. The epididymitis was destroyed by cauterization, and patient rapidly recovered. A year after the other testicle was attacked; general condition, very bad. There was a tumor of the right lobe of the prostate; vas deferens swollen; testicle destroyed by cauterization; general condition improved in eight days. In testicular tuberculosis it is only necessary to remove diseased parts. Why should not partial operations be indicated here as in other local tuberculoses? They are sufficient not only when the lesions are confined to the epididymis, but when the vas deferens is involved, and the general condition bad. I make no exception, unless the tumors are malignant. Operation consists in opening with thermo-cautery, and cauterizing with that instrument or the incandescent iron. The cicatrix causes a fibrous zone impenetrable to the bacillus. When the affection is benignant I do not touch it. Of testicular tuberculosis of children M. Felizet says: In the child it generally appears during early infancy. Of fifty-eight cases scarcely any had passed the seventh year. Have never seen the testicle invaded if the epididymis was healthy. Sometimes the lesions are confined to it; cord may be attacked, but infrequently, and still more exceptionally the prostate, vesiculæ seminales and bladder. Symptomatic hydrocele is rare, and its progress is often rapid. This is due to the embryonal condition of the tissues, which cannot oppose the invasion of the bacillus. Generalization is affected by not only the spermatic vessels, but by the inguino-iliac lymphatics. This is rapid, and soon induces cachexia. Thus I have seen a child of three years, whose parents had refused castration, succumb to meningitis six weeks after the tubercular invasion. If the testicle adheres to the scrotum it should be opened, curetted and cauterized. When suppuration is joined to a depraved general condition castration should be done at once, as the only means of preventing infection, and it is surprising to see how quickly the general condition is improved after the operation. To sum up, the indication for castration applies more to the general than the local condition. In these little patients it is often the only means of saving life.

Treatment of Appendicitis—M. Peirier—The majority, nearly unanimous, of surgeons accept the following propositions: (1) There is no medical treatment for appendicitis. (2) In acute appendicitis operate as soon as possible after the diagnosis is established; in case of doubt better to operate. (3) In the sub-acute form, characterized by what is called cake "gateau," the operation may be postponed, though the majority of the members of the Surgical Society prefer speedy intervention. (4) Appendicular suppurative peritonitis demands operation urgently. (5) In slight appendicitis there is less danger in operating speedily than in delay. (6) Diagnosis is not always easy,

* From *Revue Médicale.*

particularly in the beginning. (7) The method should vary according to the case. (8) Resection of the appendix should always be effected when it does not involve extensive destruction of parts. (9) The possibility of eventration after the operation should not preclude intervention; the dangers of this accident are less grave than those caused by delay. M. Faure exhibited a perforated appendix removed fifteen hours after the beginning of the disease. general condition of the patient, good; no temperature; nevertheless there was pus in the peritoneum.

Neuralgia of the Trifacial Nerve—M. Gerard-Marchand presented a patient affected with above. He proposed to resect the ganglion of Gasser, but following a communication by M. Guinard, divided only the superior maxillary nerve. The patient had no more severe attacks, but was not cured, She suffered in the ophthalmic region. Subsequent resection of the ganglion cured the patient.

CONGRESS OF GERMAN SURGICAL SOCIETY.

Observations of Cranial Trepanning—M. Rostl (Berlin)—A woman affected with tubercular otitis of the middle ear was trepanned upon the mastoid apophysis. A permanent fistula ensued, with paralysis of the face, paresis of the left arm, and motor aphasia. Symptoms developed in a few hours. Abscess of the brain diagnosed; trepannation of the cranium in the temporal region; no abscess found; obtained cure of the wound, but patient died a few months after. Autopsy revealed thrombosis of the internal carotid artery, numerous deposits of softening—ramollissement—and behind them an abscess traversed by the carotid.

M Lauenstein, Berlin: Patient, young man of twenty years, had numerous epileptic attacks, whose point of departure seemed to be the motor centers of the right side. Blindness, pupillar stasis and paralysis of the left upper extremity were developed; no lesion discovered by trepanning, and the osteo-cutaneous covering restored to its place. Brain protruded at first, afterwards diminished. Epilepsy and blindness disappeared, but paralysis of extremity continued. M. Lauenstein thought that the operation had produced an enlargement of the capacity of the cranium, and concludes that when the epilepsy is not explained by a local cause it is necessary to diminish the intra-cranial tension and establish a sort of safety-valve, as advised by M. Kocher. M. Bergmann, Berlin: Patient shot on right side of head in 1895, became epileptic after three months; extensive trepanning—method of Wagner—employed. In 1897 cerebral abscess demanded another trepanning; persistent fistula followed; epileptic attacks disappeared. Patient examined by Roentgen rays; much surprised to find ball lodged in maxillary sinus. M. Von Becker, Carlsruhe, reported eight observations of trepanned epileptics; did not remove substance of convolutions. He observed that as long as the bony covering was not replaced there was an intermission of the epileptic seizure, but it reappeared when the bones were reunited, again disappearing when the bony covering was a second time removed.

Resection of Vertebral Arches in Spondylitic Paralysis—M. Trendelenburg, Leipzig—From 1882 to 1898 observed eighty-seven cases of above disease in Clinic of Leipzig. Of this number twenty-three succumbed, a mortality of 82 per cent. Lately has seen and treated eight cases, of which only one died, eight months after operation. Statistics yield three complete successes, one nearly complete, one failure, and two still under treatment. Encountered abscess once, a caseous accumulation once; in other cases a rachidian pachymeningitis, which in five cases considerably contracted the medullary canal. In eight cases paralysis dated back six months; in one seventeen years, with general spastic paralysis and vesical and rectal troubles. Following is the operative method employed: A large musculo-cutaneous flap is cut at the level of the cyphosis, its base parallel with the vertebral column. The Gibbon's summit is exposed, and the vertebral arches detached by Luer's forceps; avoid using the hammer and chisel. In five cases M. Trendelenburg found the dura mater tense, projecting and colored blue. The vertebral arches are to be cut from above downwards until the normal color of the dura mater is reached. Then the flap is reapplied, and reunion by the first intention occurs. Sometimes the cure is effected slowly, and after a considerable time the results of the operation may be determined definitely. Following are the conclusions from this series of observations: (1) Spondylitic paralysis is a paralysis from compression. (2) The compression is due either to pachymeningitis, or to a contraction of the canal, which is much more frequently the case than is generally supposed. (3) The operative method, though very highly to be recommended in old cases, may cause an aggregation in recent cases, and may diminish the solidity of the vertebral column. (4) Success may be obtained in cases of many years' standing.

Cranial Fractures—M. Tillmann, of Greifswald—Experiments have been made to ascertain the action of cranial shocks, and they have shown that there is a lesion of the brain in each cerebral convolution. The cranial arch is composed of elements of unequal density and consistence. To illustrate this, M. Tillmann employs a metallic box, upon which are tried the effects of a fall from a certain height, blows upon it when resting on the ground, or suspended in the air. From his observations he has concluded that the blood contained in the cerebral capillaries is made, under the effects of shock, to strike against the thin walls of the vessels, tear them, and effuse small hemorrhages, especially upon the gray substance. Cerebral commotion is particularly produced in a fall upon the occiput, and in shocks directly upon the head, but scarcely at all when the shock or violence is expended upon the head while resting upon the ground or upon a solid body. Finally, the lesions resulting from cerebral commotion are a solution of continuity of the gray substance and small hemorrhages, lesions expanded by the unequal density of the cranium.

Importance of Atmospheric Germs in Wounds—M. Friedrich, Leipzig—Under the name of atmospheric germs M. Friedrich understands only the germs habitually in suspension in the air, and not those proceeding from the hair, the beard, the mouth of the surgeon and his assistants. Atmospheric germs are in a dry state, and it is easy to count their number and measure their virulence. But it is very important to determine if they penetrate into the circulation and multiply in the wound during an operation. It may be affirmed that they do not penetrate into the circulation, and experiment has shown that the beginning of their multiplication does not occur before the end of eight hours. According to M. Friedrich the pressure under which infection is established is of great importance. Thus the wounds of the amputated tails of guinea pigs were dipped for thirty or forty minutes in a culture of charbon without being infected, while animals subjected to infection of the same culture rapidly succumbed.

Latent Microbism—M. Schnitzler, Vienna—It is pretended that no micro-organisms are found in healthy organs, and that fragments of organs aseptically removed from healthy animals contain no microbes. To-day these opinions are not tenable. In individuals clinically sound, particularly when just cured of an infectious disease, pathogenic bacteria—bacilli of diphtheria and tuberculosis—are often found. The question of latent microbism is very important to the surgeon, for it explains the appearance of certain diseases, viz., osteo-myelitis, and their relapses, as also the slow suppurations occurring around foreign bodies In a region operated upon and cured for a year, M. Schnitzler found staphylococci of attenuated virulence. Koch found tubercular bacilli in lesions that had been cured for seventeen years. Schnitzler saw a cicatrix redden and swell in a case of osteo-myelitis cured for fifteen months; it contained staphylococci that could be cultivated. In experiments made by M. Ewald intravenous injections of rabbits showed the microbes, and frogs injected with streptococci, bacilli of Friedlander, and pyocyanic bacilli, showed virulent streptococci in thirty-seven days, Friedlander's bacilli in thirty-five, and the pyocyanic in forty-two days when the animals were warmed, but when not warmed the injected microbes were not found. In a rabbit twenty-nine days after injection of the staphylococcus aureus, an osteo-myelitis was provoked by a fracture of humerus. Schnitzler concludes from his experiments that the revitalization of latent microbes is the effect not only of a local alteration, but may be produced by a general trouble.

Resection of Gastric Tumors—M. Tuffier—In a man of forty-eight years, who showed signs of cancer of the stomach, I found a double gastric lesion. There was a tumor at the pylorus, which seemed to be the remains of an old cured ulcer, which was verified after pylorectomy. On the smaller curvature was a second tumor, entirely independent of the first, and which appeared to be epitheliomatous. I resected it after pyloroplasty.

The Microbe of Noma—M. Perthes, Leipzig—Noma is a mycosis whose pathogenic agent is a streptathrix analogous to the actinomyces, and presents itself in the form of filaments that make up a mycelium. This microbe, found in two cases in man, could not be inoculated in the dog. Noma has nothing in common with diphtheria, and injections of serum are naturally without effect. Its pathogenic agent has only a local action, and it can be destroyed by the thermo-cautery.

MEDICAL SOCIETY OF THE HOSPITALS.

Two Cases of Cure of Hysterical Deaf-Muteness—M. Antony reported an observation of two soldiers cured of the above affection, which at first caused suspicion of a possible cerebral lesion of a grave character. The first cure was of an Italian of a foreign legion, on April 3. The other, a Breton, did not recover the use of his senses until April 24. The methods employed were identical in both, and as hypnotism by military physicians is interdicted, the relation of the method would not be superfluous. The Italian, a very intelligent man, was placed under regular electric treatment, static electricity every morning, and sparks elicited from anterior part of the neck, then positive pole upon the nucha and negative over the ears; galvanic current gradually carried up to 15 milliamp. At first the treatment was entirely without effect, and only gave results in proportion to the re-education of the patient. After several sittings the subject began to pronounce the letters A and O in a deep voice, and when all were pronounced the pronunciation of syllables came next. This acquired, then began the education of the ear, which was reluctantly received, but persisted in and after several sittings the patient began to receive impressions as of a blow, then vibrations; finally the progress was more rapid, and at the end of the tenth day he repeated words of two syllables. Some days later memory was restored, and he understood and spoke without difficulty. The history of the other patient was very similar to the preceding; he, too, was treated by electricity and lessons in pronunciation.

Treatment of Hemorrhoids—M. Routier—My practice is a combination of ignipuncture and resection. In the beginning ignipuncture and cauterization of the hemorrhoids. Have tried the simpler method of dilatation of the sphincter, as recommended by Verneuil, but it was insufficient. With simple ignipuncture immediate or secondary hemorrhage may occur after the fall of the cicatrices. This I have renounced, and the following is my method: Dilate the spincters with Trelat's speculum, seize the hemorrhoidal bunch, prediculate it, transfix with ligature and cut with thermo-cautery. Results, satisfactory.

Carcinoma of Pylorus with Ganglion, Pylorectomy and Gastro-Enterostomy—M. Hartmann presented a patient operated upon; result, perfect; two others have remained cured after lapse of two years.

Suture of Axillary Artery—M. Ricard exhibited a patient operated upon eighteen months previously for an adeno-epithelioma. During a second intervention mass resected; the artery being enveloped by diseased glands it was opened laterally in course of the dissection. A longitudinal suture was immediately applied, and the blood could plainly be seen passing by the sutured artery. Radial pulse perceptible, and has so continued, which proves that the suture has held on, and no clot has obliterated the vessel

Ratification of an Error of Diagnosis: Ectopia of the Transverse Colon Taken by Radioscopic Examination for a Gaseous Sub-Phrenic Abscess—M. Bèclard—The patient presented to the Society at a previous sitting, and who I believed to have a sub-phrenic abscess, has since then died suddenly. The autopsy, far from confirming the diagnosis made during life, revealed an ectopia of the transverse colon, interposing itself at certain times between the liver and diaphragm, and was the cause of the singular image observed by the radioscopic examination. In order to avoid error I had, on two occasions, insufflated the large intestine by bellows adapted to a long canula of supple caoutchouc, deeply introduced, without being able to change the normal relations of the liver, such as percussion revealed. The autopsy revealed, on the left side, the vestiges of an old diaphragmatic pleurisy following basial pneumonia. This, primarily encysted and suppurative, had been doubtless the point of departure of the vomicæ of the patient. It had originated at the union of the two pleural layers, and was accompanied by sclerosis of the subjacent lung, with bronchial dilatation, and was the source of the abundant purulent expectoration observed during life. A very abnormal prolongation of the meso-colon of the transverse colon allowed this portion of the large intestine to be displaced and at intervals to cover the superior face of the liver. In future I shall not only not forget the possibility of a similar ectopia of the transverse colon, but shall be able to recognize its existence by radioscopic examination; the error I have committed does not diminish the value of this new mode of exploration. J. A. C.

HOSPITAL REPORTS.

NOTES ON INTERESTING HOSPITAL CASES.

By A. G. Ellis, M.D., Philadelphia.

A PUZZLING ABDOMINAL CASE.

The first case which I report has been under the care of both surgeons and physicians, and has proved a hard nut to crack to all her attending physicians. The patient is an Italian girl of seventeen, with a good family history. Personally, she never had been ill before, but has always been pale, with a slight tendency to a yellowish skin. Ten months ago she was admitted to the surgical ward of a hospital because of a swelling of the abdomen, which had begun a couple of months previously. There was no pain with the appearance of this condition, and there was no cough. The swelling went on increasing in size, however, and was thought at the time to be due to an ovarian cyst, but gynæcological examination showed no pathological condition of the pelvis or its contents. Ascites was present, and ten days after admission to the hospital she was tapped, and ninety-four ounces of fluid withdrawn; at this time repeated examination of her abdomen revealed the presence of nothing that could be called an abdominal tumor. Some time later the patient was transferred to the medical ward.

Microscopical examination of the urine shows no albumen and no casts. Blood count shows leucocytosis, to the amount of one white to 112 red cells. Hemoglobin is reduced to 60 per cent., and the red cells are practically normal.

Diuretics and purges were tried, but had no effect upon the collecting of fluid. Another tapping yielded 220 ounces of fluid, containing no leucocytes, and having a specific gravity of 1,020. The fluid is collecting again, and I will make an examination of the patient's present condition and see if we can come to some conclusion as to the cause of the obstinate ascites.

The spleen is but slightly enlarged, if any at all. The liver dullness is decreased, not extending to the margin of the ribs. Close examination of the abdomen, when not so greatly distended with fluid, shows considerable resistance and hardening, more on the right side, but extending across the median line, and reaching from two inches below the margin of the ribs to the level of the anterior spinous processes. The lungs are normal, unless the right be a little less resonant, and the breath sound not quite so loud, but the difference is so slight that it is probably only physiological and throws no light on the abdominal swelling. The points in the case then are these: Marked leucocytosis, decreased liver dullness, rapidly recurring ascites, a mass in the abdomen, no lung symptoms, heart and kidneys normal. As to what is the matter with the patient, two or three suppositions may be entertained.

The first is that she has cirrhosis of the liver, with recurring dropsy. But this ceases to be a probability since the mass has been discovered in the abdomen. The degree of leucocytosis present is against this also, as it seldom occurs, and there is often perfect physical health in cases of cirrhosis. So I think this may be set aside at once.

Next comes the question of where the mass is, and what it is apt to be. I think it is in the peritoneum, and generally such a condition, with recurring dropsy, is due to tuberculosis. If we set aside cirrhosis of the liver, the next supposition then is tubercular thickening of the peritoneum. This is a difficult matter to settle. There is no lung involvement, but there may be intestinal tuberculosis without the lungs being affected. However, I do not think this is the condition here, first, because there is very little fever—not so much as we would expect to find in tubercu-

lar peritonitis. Second, the patient is not losing flesh in any marked degree, there being no emaciation and sweats, as in tuberculosis. There being no lung symptoms and no constitutional phenomena we pronounce against tuberculosis. There is some little doubt about this, though.

I think, however, that there is a leukemic growth in the abdomen of this patient. When the blood shows leucocytosis, the condition often depends on the leukemic growth. What do we find here in favor of this view? Leukemia exists in this case. This may be the case, and the patient show but slight constitutional symptoms, as there may be white blood with good red cells. This seems to be a case of pure leukemia, without an accompanying anemia. Ascites occurs in nearly all cases, so this symptom is thus accounted for. It is caused largely by the mechanical effect of the mass. The diagnosis of leukemic growth, then, is arrived at because of the absence of anæmia, the absence of any marked rise in the temperature, the increase of the white cells, and the fact that the constitutional symptoms are slight and there is no lung involvement.

What should be the treatment here? The first thing is to build up the general health of the patient—feed well, keep bowels active, etc. Basham's mixture has been given as a tonic and diuretic. Potassium iodide will also be given in large doses, and later on the Basham's mixture changed for the iodide of iron. There is a question as to whether a laparatomy ought to be done in this case. I prefer to try the effect of medicinal treatment first. I have seen similar growths disappear under the administration of the iodides. The operation is not an easy one, and the risk is considerable. If the swelling does not lessen and the ascites goes on, and there is a prospect of constant tapping without relief, then there will be almost a necessity for discussing operation.

CHARACTERISTICS OF TYPHOID FEVER IN CHILDREN.

The case in question has no unusual points, and I merely wish to note a few points as to the peculiarities of this disease in children. First, it is a very curious fact that the age at which children are most apt to be attacked is between five and ten years, the liability decreasing as puberty approaches, though we would suppose it to be the opposite.

Second, as a rule the typhoid fever of children has precursory symptoms, but there is not nearly so apt to be headache and rarely delirium. The nervous symptoms then are less, with one exception—convulsions. Convulsions in adults are almost always due to uræmia, but not so in children, as they occur early in the attack.

Third, as a rule there is no nose bleed, but this case is an exception in that respect.

The treatment has been sponging whenever the temperature reached 102 degrees, and the giving of three minims each of dilute muriatic acid and turpentine, alternating every two hours.

METHODS OF HEALING WITH PLEURAL EFFUSIONS.

The history of this patient is that some months ago the man had an attack of croupous pneumonia, from which it is reported that he entirely recovered. A few weeks later a pleural effusion began, and has steadily increased in amount. It is my impression that his present trouble dates from the pneumonia, and was simply overlooked until some time later.

He has a right sided pleural effusion, with bulging intercostal spaces, and presents the rather unusual condition of flatness on percussion above the area occupied by the effusion, extending over the entire right side of the chest. As to the character of the effusion, it was at first impossible to state. Effusions are practically due to three classes of organisms; first, those which follow pneumonia, especially in children, and are caused by the pneumococcus. Second, the majority of the effusions occurring in adults are caused by streptococcus infection, or to a mixed infection, some other organism being associated with the streptococcus. Third, those effusions due to various other organisms, even the Klebs-Loeffler bacillus, etc., being found. I am inclined to think the effusion is purulent in this case, because of the emaciation of the patient. At the same time, there is no febrile movement. The proper thing to do is to prove the diagnosis by an aspirating needle. If pus is found in this case, about one pint will be withdrawn, because of the great compression of the lung by the effusion which has existed for a number of weeks.

In effusions due to pneumococcus infection, resolution and recovery generally takes place after tapping, or it may be several tappings. If due to streptococci, the effusion will probably form again. If this be the case, a large trocar and canula should be introduced, and a rubber tube inserted through the canula, which is then withdrawn, and the tube fastened in place, after which a large bandage is applied to absorb the pus. Washing out the cavity by antiseptics is a dangerous thing. If free drainage does not result in cure, Estlander's or Schede's operation may be recommended, though the latter is very severe, lays the patient up for some months, and then may not result in complete relief. Neither of these are indicated in this case to the present time.

A word as to non-operative treatment of these cases. There are practitioners who advocate purging, and the use of diuretics and diaphoretics for the purpose of getting rid of effusions. I must say that such treatment is futile, and of no value whatever. There is so much lymph poured out on the pleura, making it, perhaps, from one-quarter to one-half inch in thickness, that it is impossible for absorption to occur. A violent purging or sweating only deprives other portions of the body of much-needed fluids, and leaves the patient weaker, without benefiting the original condition. Do one of two things—leave alone or tap.

As to when to tap, do not tap an effusion following pneumonia sooner than four, or even six weeks, unless it produces dyspnœa; then tap at once. For the location I prefer the posterior axillary line, in the sixth interspace on the right side, and the seventh on the left.

For local anæsthesia I use a hypodermic injection of cocaine, by the Schleich infiltration method. Until two years ago I used freezing, but after a personal experience with a carbuncle, as well as the fact that it is hard to get the needle into the tissue if frozen hard, I prefer the cocaine.

The exploratory needle is used first, and shows the fluid to be a thin pus. The aspirator is now applied, and about one pint of pus will be removed for the present.

TREATMENT OF SEVERE HEMORRHAGE OCCURRING IN TYPHOID FEVER.

The girl of whom I speak had ten hemorrhages between 8.30 A. M., February 1 and 8.30 P. M., February 3, losing four quarts of blood. Hypodermics of morphine were given, both for stopping peristalsis and for depressing the respiratory center, and benumbing the patient to some extent. It is justifiable in such severe cases from this standpoint, as death from hemorrhage is a horrible one, and if it comes, the suffering is greatly mitigated by the morphine.

Calcium chloride was also given hypodermically, three grains every two hours. Its effect is to increase the coagulability of the blood, unless more than forty grains be given in twenty-four hours, when the coagulability is decreased. Saline solution was given by hypodermoclysis, at one time steadily for three and one-half hours. At least five quarts in all were given in this way. The temperature was influenced to only a small degree by the hemorrhages, probably because of the hypodermoclysis and the hot water bags which were applied. The girl has been desperately ill since the hemorrhages, one night getting three-quarters and two-sixths of morphine hypodermically to quiet her restlessness, but seems in a fair way of recovery at present. Small sloughs have formed where the calcium chloride was injected, but these are of small moment compared with the apparent benefit derived from the use of the drug.

THE USE OF THE BIMURIATE OF QUININE AND UREA IN TYPHOID FEVER.

One of the peculiarities of this case was that throughout its duration there has been a high temperature range. This was reduced by frequent sponging but as steadily it returned. In addition the patient had double pneumonia; but the man is now doing well and his temperature is hovering around the normal line. The symptoms have disappeared and his lungs are normal, although his heart is somewhat irregular.

But these points are not the reason of the interest in the case; it has been the treatment which has been the important point in the case and one which seemed to be highly beneficial. Finding the temperature high and the fever persisting, and having had recent experience with the

drug I am about to mention, it was used in this case with good result. I refer to the bimuriate of quinine and urea. Twelve grains of quinine by the mouth had been given with no effect. Quinine was then given hypodermically with striking result, especially when the new salt mentioned was used. I speak of it as a new remedy, although it is only comparatively a new one. Personally, I have never used it in typhoid fever until this winter. I have used it in two or three cases where the fever lingered, and it has given excellent results. It is extremely soluble, and has produced no abscesses. In one case of mixed infection, with the malarial organisms in the blood and the tridal test positive, the constant high temperature accompanying it was broken up by the use of this drug. It is well to know of something of this character, when extremely obstinate cases are met with. And these cases of double infection are almost always of this character. One case I saw in consultation recently had continued for nine weeks. In just such cases hypodermic use of quinine, or of the double salt preferably, will be found very beneficial.

PERICARDITIS WITH OBSCURE CAUSE.

The next case is of an entirely different character. The patient is a man of forty-eight, exposed to changes of temperature, as his occupation is that of a cook. He comes of a healthy family, and uses alcohol, sometimes to excess. One year ago he had some cardiac trouble, accompanied by dyspnœa. There is no specific history and no kidney affection. A curious point in regard to the patient is that he is fond of physical exercise and developing his muscles, and as one part of this he is in the habit of constantly hitting himself over the chest. There is really no history, except this and the use of alcohol.

Two days ago he was admitted, suffering from great dyspnœa. The urine has been examined, and is not abnormal. If the kidney is not affected the next supposition is that the heart is causing the trouble. Auscultation detects a pericardial friction sound, heard with the beat and after it—in oher words, a double pericardial friction. This is heard at the mid-sternum and extends toward the bases, both right and left, becoming fainter toward the apex. This pericardial friction sound has its site so closely where we find an aortic regurgitant murmur that this is suggested. But the absence of the pulse belonging to aortic regurgitation excludes this. It must, therefore, be pericardiac in origin, though double.

The next question is whether there is any increase in size of the heart, or a pericardial effusion. Percussion leads to the inference that there is slight enlargement of the heart, and no receding with impulse, hence no adhesions. We reach the conclusion, therefore, that we have a case of plastic pericarditis, without adhesions. It would not be out of the way to find adhesions in such a case, but they are not here. The points to be decided are, Why is this pericarditis present, and does it account for all the symptoms? The second question can best be answered first and in the affirmative. It has affected the heart, which is somewhat dilated. This happens with or without adhesions. There is no explanation of the shortness of breath in the lungs themselves. The vesicular murmur is well heard. There is slightly impaired resonance over the base of the right, which is due to the congestion secondary to the heart trouble. The heart, then, seems to be the cause of the whole thing.

What shall we do for this man? If the pericarditis is of old standing, the question is whether treatment to act as absorbents would do any good. If I knew more about the time I would act with more decision in the matter. But we will put the man upon iodide of potassium, ten grains, three times daily. A blister will be applied over the heart. This will be followed for two or three weeks. Bearing in mind the dyspnœa and beginning dilatation, he will also be given ten drops of the tincture of digitalis three tmes a day, to prevent dilatation as much as possible. To relax the capillaries, and for the dyspnœa, one one-hundredth of a grain of nitro-glycerin will be given every night, or oftener, if neded.

But we have not settled the cause of this percarditis. It is here somewhat a matter of speculation. The common causes are Bright's disease and rheumatism, but neither of them are here. There are two others possible. One is alcoholism. This can produce endocarditis, as I have seen, but have not seen it result in pericarditis. I will throw it out entirely here, though it must be remembered as a possible cause at times. I believe the blows upon this man's chest have been the cause here. I have often seen miners suffering from pericarditis, as a result of a blow, and falls also produce it. This man doing this constantly has, in my opinion, caused the trouble. This is advanced somewhat in the nature of a suggestion, though I think it can account for the lesion, and the alcohol must be remembered.

The great danger here is cardiac dilatation. Only systematic treatment can prevent this. From this point of view, the digitalis and nitro-glycerin are to be given. With these, and the man put to bed when attacks come on, we can hope to prevent to a large degree. With proper management the patient will live three, four, or five times as long as if the trouble was allowed to develop.

CORRESPONDENCE.

To the Editors of THE MEDICAL TIMES:

Dr. Morris' comments on my letter in the July number of THE TIMES have such an implied charge of incorrect diagnosis, tending to cast doubt upon my entire statement when he speaks of the "loose kidney," that I shall consider he has stepped outside of the arena of discussion into a frivolous and malicious personality.

The case he speaks of might have been one of those mixed cases in which there exists a dislocated kidney and appendicitis, the latter difficulty having been completely eradicated by the oil treatment.

Dr. Edebohls, in an exhaustive article recently published in *The Medical Record* and THE MEDICAL TIMES, in which over 3,000 articles had been consulted, says that "chronic appendicitis is the chief symptom and most important complication of movable right kidney:"

This explains the case without further comment or credit to Dr. Morris:

As it is not the office of a journal to depart from profitable discussion I shall, therefore, drop the matter, believing that those who have been interested have heard the full logical *exposé* of each side. Respectfully,

M. O. TERRY.

INFLAMMATION OF THE POSTERIOR AURICULAR NERVE.

Pain "is a disagreeable sensation which scarcely admits of definition." This is Dunglison's terse description of the constant companion of mankind. We certainly seldom find the posterior auricular nerve mentioned in the reports of cases, but that it is capable of producing pain sufficient to disturb comfort and to interfere with sleep there can be no doubt. Any branch of the facial nerve—Ramus durior septimæ conjugations—portro dura of the seventh pair, can create suffering equal to a toothache, and make trouble enough to interfere with man's usefulness. It has come to my notice quite recently that many people suffer from irritation of this nerve caused by the ends of metal spectacle frames. The portion which partly encircles the ear has a beaded end which is apt to press hard upon this sensitive nerve.

When we consider the important nerve supply of this region, severe pain from so insignificant a cause is not to be wondered at. The posterior auricular nerve arises close to the stylo-mastoid foramen, and passes upward in front of the mastoid process, where it is joined by a filament from the auricular branch of the pneumogastric, and communicates with the mastoid branch of the auricularis magnus and with the small occipital. As it ascends between the meatus and mastoid process it divides into two branches. The auricular branch supplies the retrahens aurem and the small muscles on the cranial surface of the pinna. The occipital branch, the larger, passes backward along the superior curved line of the occipital bone, and supplies the occipital portion of the occipito-frontalis.—*Gray's Anatomy, p. 813.*

It is worth while to call attention to the severe inflammation which arises just back of the ear when the spectacle frame is improperly fitted. The pain radiates downwards into the neck and to the teeth of the lower jaw and seems to involve the ear, both external and internal, suggesting severe earache, and the discomfort is so great that those suffering from this injury cannot sleep upon the side cor-

responding to the inflammation. The pain is so severe that in some instances patients are forced to abandon their usual avocations and to seek relief from the medical attendant. In one case, where there is a history of ear disease of long standing, the pain was supposed to be an inflammation of the ear with a complication of the mastoid process, until its true character was ascertained. The use of spectacles for only a few hours for two or three days created inflammation which persisted for several days, and which would undoubtedly have made considerable trouble if the cause had not been discovered and promptly removed. A large proportion of people are supplied with uncomfortable, ill fitting glasses and spectacles, and the resulting injury to the public in general must be very large. It is important that in some cases of obscure neuralgias the question of the exciting cause from some ill fitting spectacles should be borne in mind. W. T. P.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, Fellow of the Academy of Medicine of New York, Etc.

Sambucus in Parenchymatous Nephritis.—In the *Georgia Journal of Medicine and Surgery*, April, 1899, Dr. John W. Daniel states that, his attention having been called to the virtues of sambucus or elder, some years ago, he has since used it in several cases of nephritis, following scarlatina, with the result of recovery in every case. He employs only the inner bark of the plant, because it can be obtained fresh at any season. Of this he makes an infusion, allowing it to simmer for six hours or more. Patients do not object to the taste and they take from a pint for children to a quart or more for youths and adults. He has used it only in cases complicating or following scarlatina, both in their beginning and after the complaint has lasted a few weeks or months. He relates two successful cases from his own practice within the last year, and adds that he has seen the infusion administered in four other cases of scarlatinal nephritis with anasarca of two to three months' standing, all cases being attended by the best physicians in the community, the regular treatment being used and each case having been pronounced incurable, the result being recovery, and two cases being now free from albumen after ten years.

He would like very much to have this tried by the profession in parenchymatous cases and results reported.

Formalin in Whooping-Cough.—Olliphant (*N. Y. Med. Jour.*, March 4, 1899), after a year's trial of formalin in the treatment of whooping-cough, is convinced that it is as much a specific for this disease as mercury is for syphilis, or quinine for malaria. The results seem to prove that whooping-cough is a disease having a purely local lesion, the infection beginning in the fauces, and by the multiplication of the germs infecting later the air-passages, and then the general system. This idea is borne out by the fact that carbolis acid, menthol, and other antiseptics, have been used in the throat with benefit, but the results obtained by them have not been so uniformly good as those which have followed the application of a solution of formalin. Out of twenty cases so treated not one failed to be cured in less than eight days; while some were cured in three days. The application of the formalin solution to the fauces is followed by free emesis, so that the solution used in young or debilitated children should be weak.

Pain Relieved by Traction.—Dr. Myers related the history of a patient, twenty-six years of age, who had suffered five and a half years from rheumatism in the ankles, neck, shoulders, elbows, and wrists, and the right hip. For the first year improvement had followed massage and medical treatment. For the past four and a half years the right hip had gradually become stiff and painful in walking. When first seen by Dr. Myers, in February, 1898, there was some spasm but no shorteing. Motion of hip: Flexion, 16 degrees; abduction, 10 degrees; external rotation, 10 degrees. A short traction hip-splint was at once applied, and is still worn. There had been no pain since June, 1898, and the man considered himself greatly improved.

Dr. Keen recalled the case of a man in whom the terrific pain of a sarcoma of the femur had not been relieved by powerful narcotics, but had been relieved for a time by traction made with a long hip-splint, and afterward, as more convenient, with a short splint.

Treatment of Baldness by Simple Aseptic Irritation.—Jacquet (*La Presse Med.*, December 10, 1898) says that while all dermatologists agree that cutaneous irritation is the first principle in the treatment of baldness, there is no agreement as to the amount of irritation which will give the best result. Permanent irritation is certainly not as good as a slight irritation which can be renewed at will. Transitory hyperæmia can best be caused by repeated slapping of the scalp with a sharp brush, made of good pig's bristles. The brush should be applied all over the bald area, and along the margins of the hair. In a few seconds the scalp will become red and pulsating, a condition which will last for half an hour or more. The treatment should be repeated morning and night. In his own case Jacquet caused the hair to grow again on a bald spot in his head as large as a two-franc piece, by making applications of the brush in the manner described, twice a day for four months. In other cases he has made more frequent applications, five or six times a day, and has attained more rapid results. To keep the brush in an aseptic condition, he plunges it each time before it is used, into the following solution:

Alcohol	℥iv.
Ol. Ricini	℥i
Hydrarg. Chlor. Corros	℈ ij
Ext. Opoponacis,	
Tinct. Cocci Cact.	aa gtt. xxx

The brush is shaken as dry as possible before it is applied.

Cold by Ice-bags in Acute Articular Rheumatism.—According to C. E. Ide (*Wisconsin Med. Reporter*) November, 1898), whose experience with this therapeutic procedure extends over three and a half years, its rationale is right in line with the use of cold and heat for their effect upon the vaso-motor portion of the sympathetic nervous system. We find, he says, that when cold is applied the blood vessels of the tissues immediately underneath are first contracted, then dilated. This attracts blood to the part, extracting it from the inflamed area beneath. The blood vessels of the deeper tissues are contracted and remain so. These effects persist as long as the application of cold is continued. This secondary dilation which is produced by cold is greater than the primary dilation resulting from the application of heat. We can lessen the effect in either case by applying the heat, or the cold, for a time and then removing it until its good effect begins to pass away, when we apply it again. There is no danger from the constant application of cold continued over a considerable period. The writer has kept ice-bags over an inflamed appendix or joint for days—ten to fourteen—without any untoward consequences. When the cold application is finally removed and the tissues come out from under its influence, the analgesia will be replaced by hyperesthesia. This, however, is never serious.

Several cases are cited in illustration. The first is that of a man about forty years old. His case was severe and complicated by endocarditis and hyperpyrexia, which latter, on one occasion, demanded the cold plunge. The inflammation in this case had a good start in knees, wrists, heart lining and meninges, but whereas before no treatment had influenceed him for good, the ice-bags gave immediate relief, ameliorated all symtoms, and while there had before been grave doubts as to his recovery, he was, ere long, up and about with a decent heart.

Case two was that of a young man, in whom the severe inflammation was confined to the wrists. They bore all the characteristic symptoms, swelling and heat and pain being marked. "Ice-bags at once removed all pain, he slept by day and night, and in a short time all swelling and redness were gone and he got up. Now in this case the ice was applied early and the fellow really had a comfortable (!) attack of acute articular rheumatism, with no high temperature after the ice was applied."

In two other cases, where the knees and ankles were respectively involved, ice did what had not been effected by any other treatment. "Since that time," continues Dr. Ide, "Salicylates have held no place in my regard for the treatment of this complaint. In many cases they do more harm than good. . . . . All cases in which the ice-bags

are applied run a mild course, and if they are applied sufficiently early, they will abort the attack. Those patients in private practice who have refused to have the cold applied have had severe and long continued, old-fashioned attacks. Some of them now have ankylosed joints. . . . If salicylates be specific for the pain, and one desires to administer them, the use of the ice-bag in no way interferes with this. If it be desired to lower the temperature by the administration of salicylates, rather than in less dangerous ways, as cold bathing, the ice-bag in no way interferes with this. Nor does it interfere with the watching for symptoms or the application of any accustomed treatment to them. It is my firm conviction, however, that the cold and the tonics will be sufficient. The former is to be applied not only over the joints, but, if necessary, over the heart, or meninges, or any part attacked by the poison. . . . . Cold relieves the pain far better than the salicylates ever did or could. . . . No physician has done his duty by a patient suffering from acute articular rheumatism until he has, at least, made a trial of the cold.

"I would like to add that I have found cold by ice-bags to be very efficacious in cases of gonorrhœal synovitis, so-called gonorrhœal rheumatism. . . . Another point to be mentioned in this connection is that cases of gonorrhœal synovitis will improve far more rapidly and require far less after treatment if calcium sulphide is employed for a systemic antiseptic."

Electricity as a Rejuvenator.—J. Althaus discovered, while treating other affections (*Lancet*, Jan. 21), that certain forms of electricity appeared to have a specific action upon the neurons. The application of the constant current for four or six weeks is of the greatest benefit in premature senility.

Further careful galvanization of the bulb has been claimed to arrest arterio-sclerosis and involution of the central neuron. This treatment has been able to turn back the course of senility five or ten years. Even the hair may grow in and turn to its original color. Althaus actually believes that, by daily galvanism, men of sixty-five may be kept active until eighty or ninety.

The Treatment of Chlorosis by Hot Baths.—Dr. Rosin (*Klin. Therap. Woch.*, 1898, No. 17, S. 575; *Amer. Jour. of the Med. Sciences*, Nov., 1898) failing with regulation diet and the administration of drugs, such as iron and arsenic, has made use of baths, of fifteen minutes' duration, at a temperature of 89.6° F., thrice weekly. Each bath is followed by a short cold affusion. Cure was obtained in four weeks in more than fifty instances which had been under observation.

Hot Air Treatment.—C. H. Frazier (*Amer. Jour. of Surgery*) calls attention to an apparatus which has been employed in a series of cases in the University Hospital, where 300 baths were given to test its efficiency. It was found to be most satisfactory. The required temperature can be obtained quickly, in from ten to fifteen minutes, and the apparatus is substantially but simply constructed, involving nothing that can get out of order or require repair. The cases that were treated included acute and chronic articular rheumatism, gonorrhœal rheumatism, gout, traumatic arthritis, synovitis, tenosynovitis and fibrous anklosis.

The method of administering the bath is as follows: The patient's pulse and temperature are first taken and recorded. The limb, first being completely enveloped in a piece of lint, which is wrapt loosely about the part, is placed in the cylinder. The time allowed for each bath is from three-quarters of an hour to an hour. At intervals of twenty minutes the door of the cylinder is thrown open momentarily to allow of the ingress of a fresh supply of air. If the patient perspires freely, this opportunity is taken advantage of to wipe the limb thoroughly dry. If this precaution is not taken and the limb is allowed to remain bathed with sweat, there is the possibility, if the temperature is exceedingly high, of a superficial burn resulting. This happened in several cases where the precaution was not taken. The degree of temperature employed varies, some patients bearing with perfect comfort a degree of heat which would be extremely painful to others. The average is about 300° F. The frequency with which the baths are given varies with the severity of the case; usually, however, they are administered every other day.

Certain physiological phenomena follow the application of heat, such as increased arterial tension, elevation of the blood-pressure, dilatation of the lumen of the blood-vessels, diminution of the erythrocytes, decrease of hemoglobin, increase in the elimination of nitrogen, and increase in frequency of the heart's action. In cases in which there is a diathesis, either rheumatic or tuberculous, this treatment can have no beneficial constitutional effect.

Permanent cures of local lesions, symptomatic of diathetic diseases, are not to be looked for from the employment of hot-air baths, but for the relief of joint affections of traumatic origin this method of treatment is most useful and sometimes indispensable, and the results obtained can be called permanent.

In the course of the 1,400 treatments given during the last twelve months many exceedingly interesting types of disease have been examined and the great majority have been relieved. The failure of an apparatus to run to a very high temperature must certainly curtail its usefulness. Not that this mode of treatment is a panacea, by any means, but that it is proved to be far-reaching in its direct and correlative tendencies. Acting as well on deep-seated tissues and internal organs as on the periphery of the body it becomes a most useful adjunct to medical and surgical treatment.

RETROSPECTIVE DIETETICS.

Tropon: A Maximum Nutrition at a Minimum Cost.—The unheralded advent of a dietetic debutant in the domain of medicine may not be attended with the flourish of trumpets and acclaim that some sensational discovery in serum-therapy secures, yet it cannot be denied that it is to the forced feeding of patients in phthisis that actual progress counts in combating this disease. Any substance or combination of food elements which would furnish concentrated and complete nourishment in malnutrition should merit the consideration of every thoughtful physician.

Tropon, containing 90 per cent. pure albumen in the ultimate form of its absorption, must be reckoned as an important discovery, and certainly a valuable contribution to food chemistry and food digestibility. When nutrition is deficient on account of exhaustion from disease or overwork, Tropon supplies ample nutritive material and it can be readily adjusted to a mixed dietary. It does not impair normal digestive vigor nor induce the aversion and monotony arising from the exclusive use of other food products. Tropon is capable of insuring prolonged and sustained nutrition, *per se*. It is a perfect and complete substitute for albumen or ordinary food. The clinical experiments of Professor Finkler and his pupils have shown that it is best used as an adjuvant with other food. Tropon is palatable, well borne, and does not cause intestinal disturbances. On account of these many striking advantages, also its small bulk and low price, Tropon should achieve the same measure of success here as in Europe, and thereby justify the reputation of its discoverer, Professor Finkler of the University of Bonn, Germany.

Drs. Strauss and Plaut, of Berlin, Klein and Schmelinski, of Hamburg, and Dr. Rumpf, of Gordersdorf, give unstinted praise to Tropon as an unrivalled food value in the various processes of digestion, absorption and assimilation.

All of the above authorities report a rapid increase in weight from its use. Dr. S. A. Knopf, of New York, in his recent work on pulmonary tuberculosis* says on page 241: "Of the many food substances which have been recommended recently as especially valuable in the dietetic treatment of tuberculosis, I have used most extensively, and with most satisfactory results the new product, 'Tropon.'

Diet During Pregnancy as a Preventive of Dystocia and for the Determination of Sex.—Dr. Edward Preble, in *Obstetrics* for May, discusses two systems of diet, viz., that perfected by Prof. Schenk, of Vienna, with a view to determining the sex of offspring, and the plan for preventing dystocia proposed by a practical obstetrician, Prof. Prochownick, of Hamburg.

These schemes have no relationship with each other, yet they coincide in requiring highly nitrogenous food. They do not in any way conflict with or overlap each other, be-

* "Pulmonary Tuberculosis; its Modern Prophylaxis and the Treatment in Special Institutions and at Home" P. Blakiston's Son & Co., Philadelphia, 1899.

cause Schenk's diet belongs to the early and Prochownick's to the late months of pregnancy.

Prochownick first received this suggestion in 1887. He was to confine a woman for the fifth time. The four preceding pregnancies had ended respectively in perforation, version, artificial premature delivery (twice). None of her children had survived. When she became pregnant for the fifth time, confinement due on September 18-22, he placed her, on August 1, upon a special diet, much like that for diabetes, excepting that the abstention from fluids was even more strongly insisted upon.

The diet was as follows:

Morning: Small cup of coffee and about 6 drachms zwieback.

Noon: Any kind of meat, eggs and fish, with very little sauce. Some green vegetable with fat added. Salad, cheese.

Evening: As above, with addition of 1½ ounces bread and as much butter as desired.

To be entirely avoided: Water, soups, potatoes, cereals, sugar, beer.

Fluids, per day, limited to 12 or 15 ounces red or Moselle wine.

The confinement ocurred September 20, 1897. Breech presentation—little help required on part of physician. Child, female; weight, 2,530 gm. (5 lbs.); 50½ cm. long; lean, bones firm, bones of skull hard yet freely movable. Head: Circumference, 32.8 cm.; long diameter, 10.0; transverse diameter, 8.2. Large fontanelle, 2.4 long. Breadth of shoulders, 11.4. Child did splendidly on the bottle, fed like a perfectly mature child (250-280 gm. weekly); still lives, is healthy, free from rickets, and has recovered from several of the diseases of children.

During the past year (1898) Prochownick had another opportunity to test this diet in a very similar case, while during the present year a third case—in a very near relative—ended happily.

In the pregnancies, while upon the special diet, the amount of amniotic fluid was small. Prochownick again emphasizes the fact of the extraordinary capacity of the skull-bones for moulding.

Prochownick states that this simple management requires only a little will power on the part of the mother. Despite the smallness of the published material (forty-seven cases, of which number not a mother or a child has been lost), he feels satisfied that he has devised a valuable measure for the avoidance of artificial premature delivery.

Schenk's discoveries can never be made available in routine obstetric practice on account of the great number of quantitative urinary analyses involved. The rationale is extremely simple. Schenk's experience has shown him that women who do not normally excrete sugar, and especially those whose sugar may be made to disappear from the urine by adhering to a highly albuminous and fatty diet during the periods of ovulation, impregnation, and first three months of gestation (up to the time of the differentiation of sex), are practically certain to bear male children. If the sugar cannot be made to disappear by diet the chances are in favor of the birth of female children, yet this is not certain—in fact there is absolutely no plan by which the birth of female children can be assured.

Hen's Eggs in Infant Feeding.—A. C. Cotton, in a paper on infant feeding, presented before the pediatric section of the Twelfth International Congress at Moscow, calls attention especially to the use of easily assimilated albumen obtained from the hen's egg, in place of the indigestible cow casein. Long before the writer began his observations in this line of feeding, many contributions were made to the literature on the subject. In many cases, however, the egg albumen mixed with water was resorted to only in cases of extreme gastro-intestinal intolerance of other forms of nourishment, and was discontinued upon the subsidence of acute symptoms. By others, standard preparations containing egg were recommended and in some instances patented as the best food for babies. The incompleteness of the food in the former class of cases and the inadaptability of the arbitrary formula to the varying requirements of different patients in the latter, account for the limited adoption of this article of diet.

The objections to this use of egg on the grounds of scarcity, unsoundness or instability, coagulability, and expense, are taken up severally and shown to be without foundation. The writer then remarks: "Having for a number of years experimented with egg combination in infant feeding, I encouraged the advent of the milk laboratory as the best means of carrying out the idea of substituting egg white for the indigestible curds of milk casein. My case records, both in hospital and private practice, afford increasing encouragement and I find objectionable features raised by some observers, namely, flatulency and bad odor of stools, subside when the quantity of egg is modified to meet the requirements of the particular case."

Therapeutic Indications of a Vegetable Diet.—One of the disadvantages of a vegetable diet as a remedial measure, says the *International Medical Magazine*, is that the amount absorbed and utilized is much less than in animal foods, the waste equalling nearly one-half. As a consequence the patient must eat nearly twice as much to obtain the same amount of nourishment. In the preparations of cereals from which the cellulose has been removed by commercial processes the absorption is greatly increased and only about three per cent. of waste is found of the nutritive elements.

The vegetarian diet avoids the decompositions which are caused principally by the albuminoids, while the fermentations are due to the carbohydrates and result in the production of gases. Absorption and assimilation are in addition easier with vegetables than with animal food.

The class of individuals in whom this diet produces the best results are those in whom hypernutrition is present, the lazy good-livers, who eat much and drink more, who take little physical exercise, are obese, vaguely gouty, often arterio-sclorotic, plethoric, congested, and, at the same time, nervous or neurasthenic. They seldom have a true albuminuria or glycosuria and are often constipated.

On these patients the vegetarian diet acts as a cleanser of the tissues. Under its influence their plethora disappears, constipation ceases, the urates become more abundant in the urine and its acidity becomes neutralized or it may become alkaline. To produce its full results it should be persisted in for two or three months. This is difficult, but relapses from it produce recurrences of all the old bad symptoms, and finally end in a condition which their peculiar diathesis has fixed for them.

Frequently patients are found weakened after one or two weeks of vegetarian dieting. The indications are then to give a little meat once a day and guard against bad effects by prescribing two to five pounds of grapes per day.

This diet is indicated in certain forms of intestinal disturbance. It aggravates the condition in acute catarrhs of the stomach and intestines and in chronic cases accompanied by dilatation with abundant secretions. It is very successfully employed in cases of nervous and atonic dyspepsia or that due to intestinal anæsthesia with obstinate constipation.

The method of dieting should be adapted to the individual case. When the patient is feeble it should be entered upon gradually. If the patient is strong, yet with nervous or a neurasthenic dyspepsia, the diet should be enforced immediately and maintained until its full results are obtained. In all cases, but especially in the nervous dyspeptics and those troubled by habitual constipation, a grape cure may follow the vegetable diet. It is especially useful in dyspepsia accompanying congestion of the liver.

Strasser has found this treatment particularly effective in chlorosis, where frequently the patient has a distaste for meat foods. Here the green vegetables, the herbaceous roots and the fruits should be combined with a milk diet. The cereals and potatoes are less useful. The result produced is ascribed to the complete change of diet rather than to any specific effect on the system.

Solid Food in Typhoid Fever.—W. Buschejew (*St. Petersburg Med. Woch.*, Nov. 26, 1898) reports better results with a series of eighty soldiers with abdominal typhus fed with bread, a chop, boiled meat, eggs, milk, tea, wine (one or two ounces), than with a series of seventy-four fed with liquid food. Since the introduction of solid food two years ago there has been but one death from perforation and two from generalized peritonitis out of 509 patients. There were no local complications from the solid food: the general health was less depressed and recovery more rapid.

Standardization Needed.—The revision of the "United States Pharmacopœia," which is to be done next year, is a matter of sufficient importance to receive the serious consideration of the profession. The physician is the one who has the greatest interest in the reliability and availability of the products of the pharmacist. They are part of the tools

of his trade, and on their efficiency his success to a greater or less extent depends. It is a well-known fact that many of the crude drugs that form the basis of the pharmacopœial preparations are far from being as reliable as their proper medical usage demands. When such physiologically powerful drugs, for example, as colchicum, conium, hydrastis. hyoscyamus, and others may vary in their content of active principle 200 to 300 per cent. in different samples, as has been amply demonstrated by competent authorities, it would seem that something ought to be done to eliminate these fluctuations of the crude drug from the official preparations. If the latter are not uniform in medical potency, what confidence can be placed in them or in the pharmacopœia, which certainly ought to be a reliable guide for accurate dosage and medication?

It is true, the last edition of the pharmacopœia did provide standards for cinchona, opium and nux vomica, and the recently published "British Pharmacopœia" goes a step further and "standardizes" ipecac and belladonna, but the principle has not yet been made to cover calabar, coca, colchicum, conium, gelsemium, hydrastis, podophyllum, stramonium or veratrum, to say nothing of important drugs such as aconite, cannabis indica, digitalis, ergot and strophanthus, whch defy any and every chemical test thus far elaborated, and which, to be assayed at all, must be tested pharmacologically on the living animal.

It is, perhaps, demanding too much to ask the revisers of the pharmacopœia, who are soon to enter on their decennial task, to provide standards for all powerful drugs, but it seems to be well within the bounds of the reasonable and moderate to urge the expediency of extending the principle of chemical standardization to all drugs susceptible of accurate chemical assay and also of adjustment, by chemical means, to uniform standards based on a fixed percentage of active principle or principles in the finished preparation. Surely, the physician has enough to perplex and baffle him in the idiosyncracies of individual patients, and in the irremedial difficulties of diagnosis—may he not justly demand protection from the disaster which follows in the train of a weak, inert, unreliable drug product, or of a preparation possessing an unusual and dangerous potency? The golden mean between the worthless and toxic ought to characterize every fluid extract, solid extract or tincture administered in the treatment of disease.

The very general use of diphtheria antitoxin and the growing employment of an anti-tetanic serum for prophylactic purposes have acquainted the profession with the fact that the curative serums can be tested and standardized only by the physiologic method—by observing how much of the serum will preserve from sickness a test-animal into which is injected simultaneously ten times the fatal dose of the respective toxin. This is indeed a tedious, laborious, expensive and not absolutely uniform means of pronouncing on the exact strength of a given serum, but it is the only means available; there is no other, as no chemist pretends that he can test a parcel of antitoxin with his reagents. Every word of this applies with almost equal force to the testing of a limited number of powerful and important drugs like ergot, digitalis, squill, convallaria, majalis, cannabis indica and strophanthus. The chemical test for these drugs and their pharmaceutic preparations is very unreliable, and unless they are tested by the pharmacologist on the living animal their administration is a lottery affording no guarantee of prompt reaction or final cure. This fact is notoriously the cause of that unfortunate desuetude into which ergot and cannabis indica have largely fallen. Lacking uniformity of action and failing often to yield the expected results the pharmaceutic preparations of the market are wholly discarded by the disappointed practitioner. Professor Hare, in his "Therapeutics," ascribes the frequent failure of cannabis indica to the inferiority of the preparations encountered, and the worthlessness of much of the ergot on the market is beyond dispute. Witness also the report of Houghton,* who pharmacologically tested six samples "supposed to be pure strophanthin"; one sample was *ninety* times as strong as another, and the remaining four varied between these limits of one and ninety.

If drug preparations can be made uniform in strength by the comparatively simple and inexpensive means of chemical assay well and good, otherwise the physician has a right to ask the wealthy and prosperous manufacturer to apply the physiologic test to preparations whose activity can be gauged in no other manner.—*Reprinted from the Journal of the American Medical Association, July 1, 1899.*

* Journal, Oct. 22, 1898.

The Poisonous Properties of Pure Water.—Hans Koeppe (*Deutsche Med. Wochenschrift*), September 29, 1898) discusses the effect of drinking chemically pure water, water containing no dissolved salts or gases. Pureness of water in this sense is determined by testing its electrical conductivity; the greater the conductivity the more impure is the water. It is exceedingly difficult to prepare water with a conductivity less than 2.13 on this scale. For comparison it may be said commercial distilled water has a conductivity of over 49, and ordinary spring water of 500 to 600 or more. Now the action of distilled water is well known; it withdraws salts from the tissues, which swell up by imhibition, and is a dangerous protoplasmic poison. When swallowed it cuases a swelling up of the superficial layers of the gastric epithelium, which die and are exfoliated. That washing out of the stomach with distilled water has a bad effect is proved; really pure water would be worse still. A remarkable fact is that waters occur in nature purer than ordinary distilled water. Hence the practical importance of the subject to medicine. Among these is water obtained from clear natural ice, which may therefore cause gastric catarrh and vomiting when given to patients to suck. Artificially-made ice never produces such pure water on melting, and is, therefore, safer. Hence guidebooks always warn travelers not to drink water from snow, glaciers, or clear mountain torrents, which, instead of quenching thirst produce gastritis. The most remarkable instance is that of a spring at Gastein, which has been known for centuries as the "poison spring," and no one will drink its water. Yet no poison has ever been found in it. The simple fact is that the water is purer than distilled water, and, in consequence, has even a more injurious effect.

Rectal Instead of Intravenous Injections of Salt Water.—According to the *Journal de Medicine de Paris* (*Therap. Gaz*). Pauchet has used salt water in the proportion of 8 per 1,000 in hemorrhages after surgical operations and in parturition by means of rectal injections, with very good results.

He claims that the use of saline solution by the bowel has none of the disadvantages of either intravenous or hypodermic injection. The patient receives a rectal injection of a pint of the salt solution, and this may be repeated if the collapse is great or the hemorrhage has been great, two or three times in the course of a day. He has known of cases where as much as three quarts have been absorbed in the course of twenty-four hours. Should the bowel become intolerant then other methods have to be resorted to, but Pauchet asserts that the pulse improves, the urine become abundant, the mouth becomes moist, and that this treatment also seems to diminish the vomiting following the use of an anæsthetic. A similar recommendation to that of Pauchet is made by Fieux in regard to post-partum hemorrhage, he also claiming that such injections are an exceedingly valuable method of treatment.

"Medical Asepsis.—A writer in the *Charlotte Medical Journal* is decidedly of opinion that no agency has more to do with the successful termination of disease than true medical asepsis. It would be inconsistent for the physician to order the room, bedding, and clothing of a patient disinfected and allow that patient to use the same spoons, glasses, and graduates for perhaps days without disinfecting them; or to carefully attend to the patient's immediate surroundings and neglect the water or food-supply.

"Every progressive physician should attend as carefully to securing medical asepsis as the modern surgeon does to securing surgical asepsis. If better results are had by the methods of the latter, certainly the same efforts are justified by the former.

"There can be no question that medical asepsis is one of the agencies of certain results in the field of therapeutics. Furthermore, the best therapeutic agencies are the ingenious employment of placebos, and as these are intended more for their moral effect than otherwise, careful attention to medical asepsis will assist largely in the attainment of that object."

MISCELLANY.

—The British army is to form classes of non-commissioned officers to be taught chiropody by the surgical staff.

—A farmer near Noblesville, Ind., fifty-two years of age has never had teeth, and all four of his children are toothless.

—Absolute permanent baldness following the administration of a quarter of a grain of thallium is reported by Jeanselme.

—Owing to the introduction of the four year course in our medical colleges the number of graduates this year has been very small.

—Hippocrates, who lived over 2,000 years ago, knew only 234 species or kinds of plants. The number known at the present time by botanists numbers over 200,000.

—It is said that at the present time there are several life insurance companies in England that take vegetarians at reduced rates, considering them better risks.

—Peroxide of hydrogen acts rapidly in disintegrating the solid cerumen: In a few minutes after its use the wax can readily be removed from the ear by syringing.

—Dr. William Russell, of the class of 1826, and the oldest Harvard graduate, died last week, aged ninety-nine. He was a practicing physician and had never worn an overcoat.

—A German investigator states, according to the *Electrical Review*, that experiments with a totally color blind person show that a color blind eye may be very sensitive to Roentgen rays.

—The Shah of Persia has conferred the order of the Sun and Lion, the highest honor in the land, upon his physician, Dr. Holmes, an American established in Persia since 1874.

—Exchanges tell of a young woman in Minnesota who can distinguish absolutely no color, everything to her being pure white. As a consequence she is compelled to protect her eyes against the glare.

—*Cancer Home.*—The State Board of Charities has refused the application of Mrs. Lathrop for a cancer hospital on the ground that the patients can be much better cared for in the Department of Charities Hospital.

—According to W. Murrell, M.D., F.R.C.P. (*Med. Press.* Jan. 25, p. 82) three drops of oil of cajeput on a piece of sugar or on a crumb of bread, taken frequently is worth all the other antifermentatives put together.

—The average human system, it is said, is capable of consuming about three ounces of whiskey in twenty-four hours. More than this constitutes an excess, injures the system and is thrown off unchanged by the excretory organs.

—Dr. E. M. Chamot, of the chemical department of Cornell University, states, as a result of a chemical analysis of wall-paper, which he has been carrying on for several months, that nearly all wall-paper sold at the present time contains arsenical poisons, some of them in large quantities.

—It is said that a London medical society has reserved a number of meetings in each year, which will be devoted to a recital of unfavorable cases and to a confession of errors in diagnosis and treatment fallen into by members of the society.

—A severe case of exanthema in his child and a tedious nephritis in an older member of the family, have induced Baginsky to advise "waiting with the syringe in your hand until some manifestations of diphtheria are evident before making a preventive injection."

—The most painful burns are assuaged in a moment by the application of the following, according to the *Medical Record* of Oct. 1, 1898: Cocain hydrochlorate, grs. 5; camphophenique, ℥ss; olive oil, ℥ss. Rub up the cocain and the camphophenique and add the olive oil.

—An international congress for childhood will be held at Budapest, Hungary, during the latter part of next September. It will continue through five days, and there will be five sections. In addition there will be sections having no immediate connection with medicine—judicial, pedagogic, charitable and philanthropic.

—The editor of the *International Journal of Surgery* very properly says (*Phila. Med. Jour.*): In catheterizing a woman, do it by sight, not by touch. It is of no advantage to sweep the end of the catheter over a possibly infected surface before introducing it within the bladder.

—Neugebauer reports the unique case of a well-formed woman, normal in all other respects, with a penis between the vulva and anus. The penis is on the median line, 52 mm. in length, and resembles the normal penis in every particular; noted by him during normal childbirth.

—A Polish physician, Arnstein by name, has employed apomorphin when, after injection of antitoxin for laryngeal diphtheria, the swelling and softening of the false membrance cause signs of suffocation. A hypodermic dose of 1-12 of a grain induces vomiting and clears the larynx.

—The Johns Hopkins University has just sent a scientific expedition to the Far East to study tropical diseases. Among the places visited will be Yokohama, Kobe, Shanghai, Hong-Kong, Singapore and Colombo, but most of the actual work of the commission will be done in Manila.

—A Parisian journalist has started a magazine called the *Rheumatics' Review*, the first number of which has just appeared. Its declared object is "to amuse, and, if need be, cure" the sufferers to whom it is addressed. A special feature of the new magazine is to be its correspondence columns.

—*Trambini's Embalming Fluid.*—Arsenious acid, 80 c. grm.; cinnabar, 1 grm.; alcohol, 9 kilog. Inject the circulating system under usual precautions. It is said that this liquid keeps the body fresh and flexible for more than two months. It then begins to dry and indurate, so that it will preserve indefinitely.

—Dr. Mounier relates in *France Noire* that the natives of the French Soudan take rectal injections daily, the syringe a calabash with a pointed tip. The subject lies on his belly across the lap of a friend, who inserts the tip and blows into a small hole on top. The friend then takes his turn across the other's lap.

—Gelototherapeutists is the name given to physicians who treat patients suffering from various diseases, ranging from bronchitis to anæmia, by prescribing hearty laughter. A contemporary suggests that there is a great opening for physicians in studying various ways of exciting laughter, such as tickling, farcical comedies, puns, etc.

—The stomachless woman of Dr. Carl Schlatter, of Zurich, continued to do well, gained in weight, and seemed to be enjoying herself for one year. She was kept in the hospital and under observation, not because it was necessary on her account, but because it was desired to study her case in the interest of physiological and chemical science. She died from multiple carcinomatous metastases.

—In a recent address Dr. Nicholas Senn asserts that an army surgeon requires more courage in a fever camp than on the battlefield. The London *Lancet* agrees with this, and adds that to the eye of scientific faith the microbes are not less real than the Maxims, and they are certainly not less deadly; moreover, they have to be faced day and night, for weeks and months, instead of for a few breathless minutes. "Decidedly the 'non-combatant' is the greater hero."

—Private H. E. Redwood, who is now serving in the Philippines, was, when he enlisted, so affected with stuttering that the recruiting officer was tempted to leave him off the rolls. At the battle of Mariquina he was shot in the face, the bullet passing through his mouth and making its exit near the back of his neck. He recovered from the wound, and it is stated that he now stutters no more, and that he is busy completing the telling of stories which he has never been able to finish on account of his halting speech.

—The editor of *Medicine*, discussing the proper mode of executing criminals, suggests, as an obvious and simple solution of the whole matter—now that a broader humanity has done away with unseemly haste in the infliction of the death penalty—that we should choose "the somewhat slow but perfectly effectual method of natural decay of the body which comes of advancing years." It is, he feels sure, "the only solution that will give perfect satisfaction to the condemned, conserve the feelings of relatives, and keep intact the æsthetic sense of an advanced and advancing civilization."

ORIGINAL ARTICLES.

THE DIAGNOSIS AND TREATMENT OF HEADACHE.

By Jos. C. Patterson, M.D., Philadelphia.

THERE is no subject which the public feel more competent to treat for themselves than the question of headache. Yet this is a subject which every practioner approaches with diffidence and anxiety, for it is well known that there are few subjects in medicine which present as many obscure points. The term "headache" in itself is an obscure expression, for it means a pain in the head and nothing more. And while the symptom is often practically the same, the origin of it may be very obscure and come from very varied sources. In the first place the headache may affect different structures of the head; the membranes of the brain, especially the dura, the skull and the scalp, can be the seats of this pain.

It is better to make a classification of the subject of headache; in this way the various causes can be examined into separately and eliminated if possible. Hence headaches can be divided into two great classes, those due to organic causes and those which are non-organic in origin. Of course the headache due to an organic cause is such a headache as is produced by some actual demonstrable lesion such as a tumor, an exoxtosis within the skull, by a piece of bone irritating the dura or by an inflammation of the dura itself. The diagnosis of headaches due to this cause can be as a rule easily made, for on reflection it will be seen that as the cause of the trouble is permanent, the headaches themselves are apt to last from day to day with but little variation.

Generally they are associated with other very definite symptoms. For example, in cerebral tumors there is commonly either dull aching and continuous headache or hard stabbing and paroxysmal head pains, which may be diffused over the entire head; sometimes it is limited to the front or back of the head. When in the back of the head it may extend down the neck, especially in tumors in the posterior fossa, and when in the front it may be accompanied with neuralgic pains in the face. Occasionally the pain may be localized and associated with tenderness on pressure. There is nearly always headache if the tumor impinges on the membrane. Now as a rule we have associated with such a tumor inflammation of the soft membranes, and this inflammation is apt to extend to the sheaths of the optic nerves and give rise to the intra-ocular appearances which are known as optic-nuetrics. In other words, headache due to organic disease in the cranium is apt to be associated with eye symptoms. There are also likely to be general symptoms, such as some effect of motion or sensation, or there may be symptoms indicating focal disease of the brain.

In organic headache due to such causes as syphilis there are generally associated brain symptoms, such as delirium, excessive sleepiness, vomiting and convulsions, or there may be more or less marked mental failure.

In regard to headache of organic origin it is well to remember that it is necessary to make a systematic examination of the entire body in order to determine the presence of an actual brain lesion. The symptoms which point to organic headache are constancy of the pain associated with the eye, motor or sensory symptoms, and at times localization of the pain, and even tenderness on percussion.

When it comes to the discussion of headaches inorganic in character we at once come to a variety of causes. The first to be considered is that paroxysmal affection characterized by severe headache, usually on one side of the head, and frequently coupled with disorders of sight, which is known as hemicrania, sick headache, or migraine. This condition, which is frequently hereditary in character, attacks most frequently women and the members of neurotic families. It is possible in many cases to obtain the history of gout or rheumatism in the family. The disease is regarded by some as a toxemia due to disordered intestinal digestion. Eye-strain, caries of the teeth, adenoid growths in the pharynx, and especially abnormal conditions of the nose, are all important conditions to be eliminated in the consideration of this question. Powerful emotions, mental or bodily fatigue, or the eating of some particular articles of food, may all be sufficient to cause this form of headache. It differs altogether, however, from other headaches in the fact that there is present generally more or less sympathetic nerve disturbance. Again, premonitary symptoms are present in many cases; in the vast majority there is a distinct aura, which may be most varied in character. For example, a person suffering with migraine may notice zigzag lines of stars dashing across his field of vision, and experience soon teaches this individual that it means that he is going to have an attack of headache. In many cases the aura may be most remarkable; apparitions may appear, such as visions of mice, dogs, etc. Transient scotoma may be present. In some instances there is spasmodic action of the pupil on the affected side, which dilates and contracts alternately. Again, a condition of mental exhilaration sometimes precedes these attacks, or the opposite condition, that of depression, prevails. For example, a patient will be unusually bright, talkative and good humored, which will cause every member of the family to realize that she is going to have a headache. Curiously enough, however, disturbances of the other senses are rare; scarcely ever are there any upsets in the senses of smell, taste and hearing.

In this attack the patient generally suffers from one of two conditions. In the first form the face is flushed, and the pupil of the affected side is contracted. This is undoubtedly due to paralysis of the sympathetic of the affected side. The face is also comparatively warm. It is sometimes bathed in perspiration. This, as a rule, lasts for several hours, becoming less marked as the pain disappears. In the second form there is instead of paralysis excessive stimulation of the sympathetic nerve of the affected side, and the skin is blanched and the pupil dilated. This condition persists during the greater part of the attack. Here we have features which are more or less decided, and enable us at once to distinguish migraine from ordinary headache. The migraine attack may pass away simply by the pain be-

coming less and less, the patient going to bed and sleeping it off, or it may be relieved by vomiting.

The latter termination is so frequent that it is ordinarily spoken of as "sick headache." Migraine may, therefore, be diagnosed by the one sided nature of the attacks, by the sympathetic nerve disturbances, which are, however, not always marked, and by the presence of the prodromal symptoms.

The sympathetic is not a nerve that suffers much pain; the pain must, therefore, be really in the terminal distribution of the fifth facial nerve. Every head pain must, therefore, be relegated more or less to the distribution of the fifth. It must be that in migraine the sympathetic modifies the nutrition and other processes in the region supplied by the fifth.

In the superficial occipital headaches the fifth is not involved, for these parts are supplied by another nerve. In headache affecting the nerve trunk, such as seen in malaria, there are tender points over the course of the nerves themselves. In migraine it is well to remember that there are no tender spots and the ache is diffused.

Next come the disturbances due to mal-nutrition of the fifth nerve, giving rise to vague, diffuse and occasionally constricting pains. This is the variety of headache which is found in cerebral anæmia or hyperæmia. The anæmic headache is associated with anæmia or chlorosis. There may be also other signs, such as those of neurasthenia. The anæmic headache is apt to recur; it is dull and persistent, but it never reaches the point of suffering found in sick headache. The same statement is true in reference to the hyperæmic headaches.

Next comes the important division of headaches produced by diathetic and toxic agencies. In diathetic headaches in a number of cases it is almost impossible to determine whether there is migraine or irritation of the meninges, due to a deposit of urates. Patients with gouty histories are apt to have also neurotic histories. In attempting to make the diagnosis between gouty headaches and migraine it must be remembered that the patient may suffer from both affections, having true gouty headaches and migraine in addition.

Headaches of rheumatic origin differ very much from gouty headaches. Headaches due to rheumatic irritation of the meninges generally occur in the rheumatic attacks, and may be associated with signs of mental disturbance. These rheumatic headaches more frequently attack the fibrous tissues outside of the skull; extensive aching with tenderness of the aponeurosis of the occipito-frontalis muscle is common. These rheumatic headaches are generally found with other symptoms of rheumatism.

Uræmic headaches of course are generally associated with symptoms which are likely to lead to a proper diagnosis. The patient's pulse is apt to be hard and more resistent than normal; the tension is higher, and the radial vessels may be atheramatous. In all headaches it is an important rule to remember that the urine should be examined as a matter of routine.

The character of the uræmic headache is different from that of other headaches. It is described as of a dull, heavy character, and is frequently associated with some weakening of the senses such as a little dullness of hearing.

Diabetic headache is, of course, associated with the other symptoms of diabetes. Its presence is always of serious significance, as it not frequently foretells diabetic coma and death.

There is sometimes a syphilitic headache not due to inflammation of the membranes, but associated with the general blood poisoning. There is no special syphilitic deposit or inflammation of the membranes. These headaches are relieved by the iodide of potassium, and seem to be due to irritation of the membranes. Syphilitic headache due to true gummatous deposit or specific meningitis, of course falls under the classification of organic headaches.

Malarial headaches distinguish themselves from other forms of headache by the peculiarity of other malarial affections—namely, that of recurring at tolerably regular intervals. Malarial headaches may be general and widely diffused headaches, but as a rule and for some unexplained reason they affect especially the frontal region of one side, so that the disease is frequently known as "brow ague." During the attack the supra-orbital nerve of the affected side is very sensitive, for if the finger is placed over the supra-orbital notch, although not much pressure is made, the patient will flinch and even scream. If the nerve is rolled under the finger it will be found that it is swollen. These malarial headaches are usually easy to diagnosticate. They are headaches occurring at intervals more or less regular, and affecting pre-eminently the brow and generally only one side.

The headaches due to the action of other poisons, such as alcohol come next. The alcohol headaches are of two kinds. We have the chronic alcohol headache, which is probably due to some actual change in the membranes. In making post-morten examinations of chronic alcoholics the physician is apt to find the pia opalescent, and along the veins are little white strips where exudation of leucocytes has taken place. It is not improbable that the dura also suffers thickening from chronic irritation in chronic alcoholic poisoning. The second form of alcoholic headache is that which follows a debauch, and is due not so much to irritation of the membranes as to over distention of the sinuses. Alcohol produces an intense hyperæmia, and probably has some specific effect upon the nerve protoplasm. Following the hyperæmia there is a venous stasis or congestion, dull, heavy headache.

Other toxic headaches include the condition known as lead encephalopathy. This rare condition is associated with other symptoms due to the presence of lead. The patient is apt to have epileptiform seizures, or dementia. In addition, there may be wrist-drop, lead colic, or the blue line on the gums.

Headaches following exhaustion of the brain by such stimulants as tea, coffee and other nerve stimulants are rather common. If the brain is thoroughly exhausted by the over-use of nerve stimulant there is "a nerve pain," probably in the membranes, probably being a neuralgia of the distribution of the fifth nerve in the dura mata.

This great group of sympathetic headaches, including those due to purely functional disturbances, as anæmia and hyperæmia, the various diathetic headaches, and the toxic headaches are important,

but there is another important group; it is the group of headaches of reflex origin. A case is not one of megrim; it is not a congestive headache; it does not occur in a chlorotic girl, or in a patient with excessive anæmia; there are no diathetic causes; you find no toxic cause, and the headache is narrowed down to one of possible reflex origin. Sympathetic or reflex headaches are in the vast majority of cases due to some ocular defect. Eye headaches are headaches in which the pain is felt over the brow. The pain usually remains in the neighborhood of the orbit. Very frequently, however, it is reflected to the occiput. Examination of the eyes in these cases will probably reveal astigmatism, or muscular insufficiency. If these defects cause the headache, their correction will relieve the pain. It is not possible to make a diagnosis of the cause of the headache in every case at the first examination. Many cases must be studied for a long time before you can absolutely decide to what the headache is due.

In considering headaches of nasal origin it is well to remember that affection is more common than abnormalities of the nasal chambers. Many persons suffer with hypertrophy of the middle and inferior turbinated bones. The hypertrophied bone may press against the septum, and the individual may feel the pain elsewhere, although he may suffer discomfort from not being able to breath properly. The pain may extend over the malar, temporal or frontal region. Examination would show whether or not there was hypertrophy. If a probe is passed and the hypertrophied parts be touched ever so gently, the chances are that the headache will be made worse; or pressure on the nose over the affected side from the outside, or on the inner wall of the orbit, may increase the headache.

Gastric headaches is very frequently confounded with migraine. A patient with migraine, however, may have a normal stomach. A person the subject of ordinary gastric headache is apt to have signs of chronic gastric catarrh. There is apt to be a coated tongue, tenderness over the epigastrium, eructations of gas and frequently of acid substances, and there is often heartburn. These conditions are relieved by vomiting, and as a rule the vomit is intensely acid. This is peculiarly true of reflex gastric headaches. They do not have the one-sided character of migraine, but have a diffused character.

The headaches due to cardiac or pulmonary affections are not very common. These headaches are included because when the physician fails to find a cause he must continue the examination. Examining the heart, hypertrophy or dilatation, or slight valvular affection may be found. In such cases, if proper attention be given to the hygiene, and suitable treatment be employed, the headache will be relieved. Headaches of pulmonary origin are obscure. In phthisical subjects we have headaches from exhaustion and anæmia. The typical pulmonary headache comes commencing with congestion of the lungs.

A common form of headache is due to disease of the uterus or its appendages; it is also reflex in character. This is almost always a vertex headache, situated on the top of the head and relieved by pressure. A headache in a woman which is vertex which is more or less constant, and which has the peculiarity of being relieved by pressure, should direct attention to the uterus and ovaries.

Headaches due to affection of the bowels are possibly the most common of all; especially are headaches from constipation very frequent. The headache of constipation is reflex, and is relieved by having the bowels opened, even if the laxative be not such as to produce marked revulsion. Even if a cathartic, simply sufficient to unload the bowel, is given, the headache is relieved at once.

Hepatic headaches are included in these various headaches to impress the necessity of always looking for the cause. The patient must be examined from head to foot. No organ should be left unexplored. The condition of the heart and blood vessels, the condition of the kidneys, the condition of the liver, of the bowels and stomach, and, if the patient be a woman, of the generative organs.

"Hysterical headaches" are neither headaches of nervous exhaustion nor headaches of cerebral anæmia. The headache which comes on in nervous exhaustion, and which may be included probably with the headaches of cerebral anæmia, is dull and diffused, and at times associated with a sense of constriction or "gone" feeling in the head. The hysterical headache is generally marked on one side, but is accentuated in one spot. It may be in the parietal region or near the vertex. The patient will frequently use this expression: "It feels as if a nail were driven into my head." You will find on exploring the scalp that while you may press firmly on all other regions, yet when you press on the spot in question it causes great pain. No one has yet given an explanation of hysterical headache. It is one of those curious and anomalous features which hysteria presents. There can be no doubt that the hysterical headache is a real headache—that it is a genuine pain. You cannot decide how great the pain is, but the probability is that there is decided suffering, just as hysterical anæsthesia is a decided anæsthesia. It is a real condition and not feigned. The great mistake usually made is to imagine that hysteria is feigned, and that hysterical patients are necessarily malingerers. This is not by any means necessarily the case. In fact, in profound hysteria it is not the case. The condition of hemianæsthesia, hemiplegia or local palsy is true and absolute so far as the patient is concerned.

The headaches which are symptoms of the various febrile disorders must not be overlooked. These headaches occur in the prodromal stage of the various fevers and are accompanied with other symptoms. The man who has a headache in the prodromal stage of smallpox will also have a terrible backache and aching in the limbs, and will say that he feels bad all over. The headache is not the most marked feature. It is only one of the features. An examination of the pulse and temperature should be sufficient to explain their cause.

The treatment of headache is an exceedingly difficult question. The treatment of organic headache depends on general principles. If there is a tumor, it should be removed, if possible. If there is meningitis, it is to be dealt with on general principle. If the patient bears the iodides and mercurials well, they should be given, while at the same time counter-irritation should be practiced.

In the treatment of migraine it is well to remember in the first place that the patient should be put on such constitutional treatment as will improve the general condition and bring it up to a high standard. Errors of diet should be eliminated, not because the patient has gastric catarrh, but simply because he suffers with migraine. These patients should be given large amounts of milk in addition to other food. The food given should be in a digestible form. It is improbable that you will be able to stop these attacks altogether. This is not invariably true, but it is so in many cases. In addition, it is necesary to practice some decided interference at the time of the attack. One plan is to use morphia. Of course, that is a decided way of dealing with pain due to any cause, but it is, of course, a dangerous method of dealing with pain, especially where there are recurring attacks, for the patient almost inevitably acquires the "morphia habit."

Again, where the migraine is associated with sympathetic spasm, the pain is often relieved by large doses of whiskey or Jamaica rum, especially if it be given hot. Various drugs have in recent times been given, not only for migraine, but also for other head pains, notably antipyrine and antifebrin. Antipyrine is a very valuable drug, and is a decided addition to our armamentarium. In some way or other the notion has got abroad that antipyrine is a dangerous drug, and should not be given in large doses. Antipyrine, however, only exceptionally acts as a depressant. A good plan is to associate the antipyrine with bromides. The depressing effect, if any, can be prevented by giving digitalis, or especially by giving the aromatic spirits of ammonia, which is acceptable to the stomach in this condition. Cannabis indica also enjoys a reputation in the treatment of migraine, and a just one. One-fourth to one-half a grain of the extract may be given at intervals.

In treating headaches due to anæmia or chlorosis, or to hyperæmic stages, general principles of course, must of course be the guide. The anæmic patient needs the best hygiene, and especially does he need iron; he requires the most nutritious diet. In the headache of chronic nervous exhaustion and neurasthenia, the only way to treat these cases is to put the patient to bed for a time. Forced feeding, especially with milk, massage and Faradization, will cause improvement in the general health, and the headache will disappear. You may treat some of these cases in other ways, but you will make no impression on the headache until you put them to bed. If it is the diagnosis that the headache is due to neurasthenia, do not hesitate to tell the patient of the necessity of rest, else you will fail in relieving the headache.

The headaches due to disorders of nutrition, as the various diathetic headaches, will call for their special treatment. The uræmic, rheumatic and diabetic headaches suggest what is to be done. The same is true of the toxic headaches. In connection with the malarial headache it is not, as a rule, relieved by ordinary doses of quinine, such as would prevent the recurrence of a chill. If large doses are not given you will fail. Twenty and even 30 grains are required to make an impression. Where it is necessary to give very large doses it is well, in order to avoid irritation of the stomach, to give the drug in 10-grain doses in capsules every hour with a quantity of milk, until the required amount is taken. For the best effect the remedy should be administered four or five hours before the headache is due.

In headaches of reflex origin, each case will require its appropriate treatment. The eye, nasal and gastric headaches instructively suggest their respective treatment. Gastric headaches are due to chronic gastritis, and the treatment should be directed to the relief of this condition. Using pepsin and other digestants is not sufficient. Put the patient on a bland diet, give him nothing but milk, perhaps with a few crackers or stale bread. To this possibly may be added beef juice from time to time. If he will consent to give the stomach a rest he will recover. This is the most important part of the treatment. Nitrate of silver is also of service. One-fourth of a grain of nitrate of silver with hyoscyamus or belladonna may be given thirty minutes or an hour after meals. It should be swallowed with as small a quantity of water as possible. Even if there be formed, as some assert, an albuminate of silver, there can be no doubt that the drug has some alterative effect upon the stomach. You would not under these circumstances think of giving mustard. You could give the patient warm water until he could retain no more. The moment vomiting takes place the headache is relieved. The vomiting should be followed by the administration of an alkali, such as bi-carbonate of soda, soda mint, or a tablespoonful or two of lime water in ordinary water.

In obscure headaches, due to no obvious cause, but in which there are physical signs of cardiac disease this must be taken into account. Do not forget further the great rôle that the bowels may play in the production of headache. Uterine headaches will require their special treatment of course.

The treatment of hysterical headache is among the most difficult; but here again general principles must guide the doctor. Treat the hysterical patient as a neurasthenic patient. It so happens in hysteria we almost always have neurasthenic symptoms.

A WANT OF TYPE IN DISEASE INHIBITS MEDICAL PROGRESS.

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THIS age is one of unparalleled progress in all lines of thought, none the less so in medicine. It has always seemed to me that theory has been too far in advance of known facts, or as commonly put, science.

We, as medical men, base action on theory—singly—and make victims thereby quite often of those whom we treat. I am inclined to the opinion that in every treatment of disease science should form a large part of it, in that our patients may be fairly treated. I scarcely think it ever justifiable to place a patient seriously ill on purely theoretical lines of treatment.

As science then, plus a minimum of theory, at

most, should be the foundation stone of all correct treatment of disease, certainly it is none the less important to scientifically understand the nature of the ailment or ailments with which we are dealing, to, in the most approved sense, treat the disorders with which we come in contact.

The nomenclature of disease in its marvelously manifold type, has to the present been imperfect, of slow progress, and an arduous undertaking. This is an obvious condition, and the cause not far to seek. If the types of disease were uniform in their behavior we would have more easy sailing and greater progress could be made. Types of diseased states are the rarest phenomena of medical experience.

We seldom see a typical disease, and if they be not typical they must be atypical, and this constitutes an inhibitory force against more rapid advancement.

In view of this, what can we do? What is the remedy? So many papers appear in medical literature with detailed accounts of existing statics which mar medical progress, *without* citing a remedy, that I hesitated somewhat to write upon this subject, because the correction of this monstrous inequality seems to lie most dimly among the possibilities of effort.

In this, however, we will first notice the defect, and trust to the future for a remedy. This strange overlapping of almost every diseased process necessarily precludes classification and grouping; renders it difficult if not impossible to cite the one original trouble, besides making it equally so to form a correct line of therapeusis. In short, it unfortunately makes of us, against will, judgment and common sense, symtomatologists.

A few citations will suffice to illustrate our meaning. In meningitis, whether it be tubercular or non-tubercular, whether it be of the dura (pachyruimengitis) or of the pia (leptomengitis) these are not often primary involvements. In the tubercular form some organ other than the basal meninges is primarily diseased, and the cerebral covering is *practically* always of secondary implication. The same is true of the non-tubercular, except in the presence of trauma. The latter follows as a sequence to some of the infectious diseases, or middle ear trouble, etc., and is rarely if ever of primary origin.

In appendicitis, according to some, it is invariably a secondary affection following either typhlitis or perityphlitis.

Again, this latter affection, appendicitis, may show itself clinically only, by the signs and symptoms of hepatic abscess, or a local or general peritonitis, or even bowel obstruction, or you may in some cases have the signs and symptoms of any or all of these affections, and thus by this many faced picture the physician, however he may be on the alert, or however an astute diagnostician he may be, is apt to be thwarted in his attempt at correctly determining the primary seat of the disease.

Pertusis stands somewhat in the same cloudy relation. It may be the cause or the effect of some of the other infectious diseases or you may have the disease presented without some of its ordinary symptoms being present, for it is claimed that it is sometimes not attended with the whoop, which, when present constitutes a pathognomonic symptom. All this points to a want of type in the processes. These illustrations could be indefinitely extended. We might give another very striking example, the disease popularly known as lymphadenitis or Hodgkin's disease; you may or may not have suppuration (generally present); it may involve only one side (generally two), but in the rare cases where we do not have suppuration of the involved structures, and where we find it confined to one side, how easy it is to confound the diagnosis with tubercular adenitis.

The truth of the whole matter is that a functional disease in the sense of interfering only with the use of a single organ, especially where structural changes are present, does not possibly exist. While we have diseased processes which have a tendency to attack primarily only one set of organized tissues, or are strongly predisposed thereto, still shortly in the process of retrograde action other functions and other organs are invaded.

In carcinoma of the stomach, for instance, the epithelial structure is primarily attacked, but shortly by fibrous propengatens the substructures become rapidly involved, and *ere this*, other organs by metastasis become invaded, and in this secondary manner any organ or structure may become diseased.

Phthisis pursues the same course. It may appear in the pulmonary structure in the osseous, glandular, or even as a skin affection, as lupus. No disease with which I am acquainted primarily and secondarily confines itself or manifests itself only to, and in, any one individual structure. This largely accounts for and answers to the meaning of the caption of this article. Different and varied structures mean different and varied manifestations of morbific action, changeable locations as to intensity of symptoms manifested and protean diseased phenomena.

This drives us, possibly unwillingly, yet surely, to the conclusion that every man who assumes to treat disease should in a sense be equipped to meet its probable constitutional behavior.

A specialist, therefore, should be well grounded in generalism. Perhaps it is not claiming too much to say that his knowledge of specialism should only be a graft, inplanted on the wider and broader qualification of generalism.

If a disease to any considerable degree confined itself to any one organ, the medical man who masters its behavior and whose knowledge is bounded by diseases of said organ, could successfully treat his patients; but this limitation rarely if ever occurs, and hence all species of incompetency arise in the line of specialism, to the detriment and sometimes at the price of the patient's life, where we find knowledge thus circumscribed.

The spirit of the present age tends in this direction; it encourages great proficiency along special lines, to the great neglect of general information.

You can't know a tree by a study of its leaves only, nor can you call one a florist who only learns one part, however essential, of growing and caring for flowers. If you only perceive the fragrance of the flower much of its beautiful nature lies buried to your appreciation. The human body, in a general sense, is only a unit; it is one, while entering into its warp and woof are an almost innumerable number

of component elements. It acts also in a concerted manner; every part as to its action must be attended to the action and use of every other part, and this structural relationship must ever be preserved, in a composite sense, in order to preserve the highest form of physical health. Indeed it may be stated in general that disease is caused by a severance of normal relations of bodily elements.

For a young man to at once embark unto the realms of a specialty is an enduring opprobrium on the medical status of the present day. Better should he be advised to pursue general hospital work for several years, or engage in clinical practice for ten or more years, during which time regarding one part of the body as deserving as any other of his most serious consideration, after which experience which brings him in touch with general diagnosis and treatment, he can rightly concentrate his efforts more particularly to one class of diseases.

In no other way can we treat fairly either our patients, ourselves or the medical fraternity.

OBSTETRIC VERSION.

By Sheldon Leavitt, M. D., Chicago, Ill.

BY the term version we are here to understand an induced exchange of one presentation for another. Certain writers on obstetrics have made the term embrace mere exchange of position as well; but, in my opinion, this is objectionable.

Nomenclature.—There are varieties of version, and a choice betwixt them is determined (1) by the extremity of the fœtal oval, which by the operation is brought to the pelvic inlet, and (2) by the method employed to effect the change. Accordingly we have cephalic version and pelvic version, the latter including as sub-varieties breech and podalic version. Then, to classify according to the operative method, we have internal version when the hand is fully introduced within the uterus for the purpose of effecting it; external version when the manœuvre is effected by external manipulation alone; and combined, or bi-manual, version, when, with the fingers of one hand in the uterus and the opposite hand upon the abdomen, the fœtus is made to undergo the designed movement.

Cephalic Version.—A change of presentation from pelvic, or transverse, to cephalic, is not easily accomplished, save under the most favorable conditions, for which reason it is not often performed. At the same time, it is indisputably true that the cephalic pole of the long diameter of the fœtal oval is usually a far more desirable presentation than the opposite pole, and the discriminating obstetrician should account himself very fortunate when able to secure it; but, in practice it has been found so difficult, and hence is so infrequently undertaken, that the term "version" is commonly used to designate that form of turning which brings the pelvic end of the fœtus to the superior strait. There are certain cases wherein our efforts at cephalic version are rewarded with success. These are chiefly in transverse presentation, and they are met only when, by redundance of liquor amnii and a sluggish uterus, the physical conditions are favorable.

A commonly accepted position for performance of the operation is the genu pectoral; but the Trendelenburg posture is more readily securable when the patient is anæsthetized, and is quite as favorable. One of the pronounced difficulties associated with any form of version is met in attempts to dislodge the presenting part, whether it be shoulder or breech, from the superior strait, and to start it on an upward course. An objection to the knee-chest position, which, *per se*, facilitates the necessary manœuvre, is found in the difficulty which it presents to external manipulation. With the woman in the Trendelenburg posture manipulation is facilitated; and, by adopting it, we sometimes succeed in converting an unfavorable presentation and bringing the cephalic end to the pelvic brim. No traction aid is afforded in such a case by the internal hand, since, in a situation so confined, the head is too large to be grasped by it and drawn downward. It is unnecessary to say that in order to effect our purpose an unequivocal recognition of both position and presentation is of the utmost importance. Should the head be found in the iliac fossa and the shoulder at the os-uteri, primary effort is to be directed toward dislodgment of the presenting part, the effort being made in a direction which will tend to move the breech toward the fundus, and the head toward the cervix uteri. This is usually true of transverse presentation, without particular regard to fœtal position; but when our efforts are directed toward converting a breech into a cephalic presentation, the matter of position possesses greater significance. In such a case it is a matter of no small import whether the fœtus present with the dorsum towards the right or towards the left, as we then have to consider the possibility of the version becoming complicated by extension of the lower extremities. For example, if the fœtus present by the breech, in the first or left dorso-anterior position, it would be far easier to effect cephalic version by crowding the breech upwards and towards the left, and the head downwards and towards the right, than to make an enforced movement in the opposite direction.

It is next to useless to undertake cephalic version in a case where the liquor amnii has escaped; but this form of version is particularly suited to transverse and pelvic presentation when there is abundance of amniotic fluid and the fœtus seems to be freely movable.

Pelvic Version.—So rarely is any other form of pelvic version undertaken that we might, with considerable propriety, substitute for the term "pelvic version" that of "*podalic* version." The most frequent call for such version is probably in transverse presentation. It is there evident that a change of some kind is indispensable, and while cephalic version is occasionally possible, and then to be practiced, it is to be undertaken as an exception and not as a rule. As preliminary to an attempt at turning by the feet it is of some importance that we recognize not alone the nature of the presentation, but also the essential character of the position assumed by the fœtus. In truth it should be regarded as a matter of consequence that the whole topography of the case be determined, as the knowledge derived from a painstaking study of it is essential to an intelligent application of obstetric principles.

The form of version to be employed will be de-

termined by the conditions and circumstances of the case, choice being made between the internal and the conjoint method. If the hand is to be passed into the uterine cavity that hand should be selected, the palmar surface of which will be addressed to the ventral surface of the fœtus. This is not urged as certain assurance of easy turning, since, even under most favorable conditions, facility of operation is often unattainable. At the same time introduction of the hand less suited to the particular work to be done brings to the operator a certain amount of embarrassment, and subjects him to unnecessary fatigue. It goes without saying that the operation should be undertaken only under strict conformity to antiseptic precautions. Sterility of the hands is more difficult to obtain than sterility of instruments; and there is correspondingly more danger of septic infection associated with version than with use of the obstetric forceps.

Even when the vertex presents we are sometimes driven to the performance of podalic version because of disproportion between the size of the fœtal head and the pelvic inlet. To one unacquainted with the mechanics of parturition it may seem unreasonable to expect successful delivery of the head by causing it to follow the body, when we are unable to bring it through the superior strait by forcible traction with the forceps. The advantage lies in diminished transverse diameters of the head below the parietal eminences, which give to the part a wedge shape; and the wedge, in head last cases, passes the brim and outlet with the narrow diameter in advance. To be sure the parietal bones can be made to overlap by lateral compression with the forceps; but, in vertex cases with a narrow pelvic brim, compression cannot be applied in the bi-parietal diameter, the pelvic mode of application being the only available one.

As a condition of successful version in such cases, a careful estimate of the existing disproportion between the fœtal head and the maternal pelvis is requisite, as otherwise, even after version, it may be found impossible to deliver.

The technique of version in connection with cephalic presentation differs in no important respect from that followed under other conditions.

We find it convenient to avail ourselves of the benefits of version in certain deliveries where the exigencies demand a speedy termination of parturition, even though the presentation be normal, and the fœtal head and the maternal pelvis close to standard dimensions. Among the contingencies which constitute an urgent appeal for speedy delivery I may mention accidental hemorrhage, placenta prævia, eclampsia and prolapse of the fundis. In certain of these cases the conditions mentioned may not require a rapid completion of parturition, but that it only be carried to the point where control may be acquired of the symptoms which most imperil maternal or fœtal life.

There are certain essential particulars concerning the various forms of version with which every accoucheur ought to be familiar. External version is usually difficult, and, in order to practice it with success, favorable conditions are required. The woman should occupy the dorsal decubitus, upon a horizontal or an inclined plane, the precise details being determined by the difficulties likely to be encountered. By placing the woman on the horizontal plane, with her thighs moderately flexed, the abdominal walls can best be brought into relaxation so as to provide better facilities for deep palpation and manipulation. The patient, lying at the very edge of the bed or table, is directed to breathe regularly and deeply, so as to increase the abdominal relaxation; while the hands of the operator, resting on the opposite poles of the long fœtal diameter, make an effort to rotate the fœtus upon its transverse axis, the two poles of the long diameter making the circumference of the circle. In thus performing version, ignorance of the relative situation of the fœtal dorsum is liable to throw the operator into confusion, and without this knowledge his efforts cannot be made in a manner to maintain close flexion of the fœtus. For example, when the design is to convert the left dorso-anterior position of the breech into a vertex presentation, the operation may become complicated by urging the fœtal pelvis upward toward the right and the head downward toward the left, instead of causing the rotation to pursue an opposite course. It should be remembered in this connection that the rapidity and facility of version depend in great measure on the degree of fœtal flexion.

The Trendelenburg position should be adopted if the presenting part be disposed to crowd the superior strait and the uterus be found to possess unusual tonicity.

In my experience, external version can rarely be satisfactorily performed, and hence I usually feel driven to adopt either the conjoint, or the internal, method. In the conjoint method of version it is necessary to introduce the half-hand, and sometimes the whole hand, into the vagina, and therefore it is of the utmost importance that both the hand and the vagina, as well as the external parts, be made sterile. We are confident that serious harm will rarely result from well conducted version, provided every attention be given to antiseptic precautions. The position of the woman should be dorsal and the plane upon which she rests either horizontal or inclined, according to the probable difficulties of the case. If the horizontal position be chosen, the woman may lie at the edge of the bed, as in external version, or cross-wise, with the hips at the edge, according to the practice or convenience of the operator. I myself prefer the former. The hand which is to enter the vagina having been carefully prepared, it is well smeared with a sterile lubricant. The practice of dipping the fingers into the family vaseline bottle is to be condemned; and with it, also, the use of soap for lubricating purposes. While soap is an excellent means for effecting mechanical removal of materies morbi it may become a medium of infection through the contamination to which it is continually exposed.

Explicit directions have been given by some instructors in obstetrics to make the hand which is about to be introduced into the form of a cone, by approximating the tips of the fingers and thumb, with the assurance that entrance is thereby facilitated; but we regard such counsel as worse than useless. A far better method is first to introduce two fingers, and then follow with the others, one at a time. In a close vulva necessary room is thus progressively made for the full hand by expansion of that part of it already introduced. The os-uteri

should be entered in a similar manner. In the introduction of the hand, and, in the necessary intravaginal and uterine manipulation, all unnecessary chafing of mucous surfaces should be avoided, as removal of the epithelia opens an additional avenue for possible infection. When the hand in the vagina comes in contact with the fœtus through the interventing membranes, it pushes the presenting part away from the pelvic brim, in a direction to favor the desired fœtal evolution, while the opposite hand presses the fœtal head, or pelvis, as the case may be, in a direction to favor the same movement, and ultimately to secure the desired presentation. The direction in which this rotation of the fœtus on its axis should be made will be determined by the character of the presentation and position.

When podalic version is attempted by the conjoint method, a knee or a foot may come within reach of the internal hand before version can be completed, thereby greatly facilitating the movement.

The essential advantage which version by conjoint manipulation has over the internal method, or that which calls for full introduction of the hand, lies (1) chiefly in its simplicity and comparative freedom from danger, and (2) in the possibility of employing it at a much earlier period in labor, and oftentimes through an os-uteri but moderately dilated.

The preliminaries to be observed in the practice of internal version are substantially those already described. Passing the hand through the os-uteri, especially when dilation is not complete, is alalways to be done with the utmost caution. If the membranes be unruptured, it is well to insinuate the hand between them and the uterine wall until full entrance has been obtained, when they should be broken and an effort at once made to secure the feet. At this juncture the uterus sometimes contracts with paralyzing force, putting an effective injunction on operative movements. But the contraction soon relaxes and enables the accoucheur to proceed. Provided the position, as well as the presentation, has been clearly recognized, but little difficulty usually attends seizure of the feet. Occasionally it happens that the two feet do not lie in close proximity, and one only is readily secured; in which case it is not advisable to spend much time searching for the second foot; but version should be undertaken with the single one. It will be found that the operation can be concluded with little additional difficulty, and usually with less danger to the child, when only one foot is brought down. The extremity which eludes the hand continues flexed ,and the necessary dilatation for delivery of the fœtal pelvis being thereby increased over that demanded when both feet are drawn down, gives occasion for lessened delay in delivering the aftercoming head.

When once the feet have been brought into the vagina, farther conduct of the delivery is the same in any form of version. In the absence of an urgent demand for haste it is to be avoided, as the parts, if slowly dilated, are less likely to suffer injury, and the dilatation is more likely to be preserved until the extraction can be completed. In any case the arms are liable to be thrown upwards by the side of the head, and to require special efforts for extraction when the shoulders reach the vulva.

There is one point connected with this part of head-last delivery which I desire to make especially emphatic, and that is the advisability of rotating the fœtal trunk during delivery, so as to turn the dorsum somewhat anteriorly, thereby causing the descending head to engage the brim in an occipito-anterior position. Some may regard this as a dangerous movement for the fœtus, and one to be avoided; but my experience with it has thus far been most gratifying. When extraction proceeds with the dorsum looking backwards, the difficulties awaiting final delivery are liable to be greatly augmented, and the fœtal dangers to be correspondingly increased.

It not infrequently happens, in a difficult version, that the operator's strength becomes so completely exhausted as to render impossible a firm hold upon the feet which have not yet passed the vulva. In such cases a slip noose of gauze is put about the forearm and pushed up until it can be made to take a hold of the fœtal ankle, upon which necessary traction can safely be made.

Contra-Indications.—Among the contra-indications for version is an undilated os. We frequently find the part comparatively unexpanded, even when labor has been going on for many hours; and if we were to consider the element of expansion alone, necessary interference would be dangerously deferred; but, in these very cases an undilated cervix is often found to be pliable and yielding under the touch, and dilatation capable of being carried to the necessary extent without much effort. Unfortunately this is not always true, the os being not only undilated, but so firm as to defy every wise effort to expand it. In an instance like the former we proceed with the proposed version; but in the latter, delay is usually advisable. External version is not hampered by a small and rigid os; bipolar version is embarrassed though not forbidden by it; but external version finds in it an absolute, though temporary, bar.

THE SEMEILOGICAL VALUE OF PURPURIC ERUPTIONS IN BLOOD DISEASES.

By Frank H. Pritchard, M.D., Monroeville, O.

PURPURIC eruptions are so striking that it would seem that all that is necessary is to recognize and divide them into simple or hemorrhagic, and take measures accordingly. But unfortunately there are a number of blood diseases which are accompanied by purpuric manifestations, and on which in our text-books but little is written.

Thus, pernicious anæmia may be associated with bleeding of the gums and purpuric blotches, so as greatly to resemble purpura hæmorrhagica. Here the examination of the blood would distinguish it, for in this variety of anæmia there should be poikilocytosis and a reduction in number of the red corpuscles, with a more intense redness of those remaining.

Leukæmia is at times accompanied by cutaneous eruptions which nearly or wholly resemble purpura hæmorrhagica, and, indeed, it has been taken for that disease. Such a mistake might easily be made

unless one were careful to go over the ground thoroughly. In leukæmia the purpura is secondary to enlargement of the spleen and liver, and there is a marked increase of the number of white corpuscles in the blood, which is easily discovered by microscopic examination.

The blood changes and increase in size in the liver and spleen are characteristic. In pernicious anæmia the hemorrhagic symptoms are secondary to well marked symptoms of anæmia, while in purpura hæmorrhagica the anæmia is consequent upon the hemorrhages, though there must be some blood changes in this disease as well, for the pallor may be extreme and yet not so very much blood be lost.

Hodgkin's disease, or pseudo-leukæmia. is at times attended by purpuric eruptions, particularly towards the last, which may be strikingly like purpura hæmorrhagica. Here the enlargement of the lymphatic glands, with examination of the blood, would be of service in differentiation. Though the changes in the lymph glands are usually the chief distinguishing signs, yet a swelling of the spleen may precede.

Acute leukæmia is peculiar in that the gravest signs, which with chronic leukæmia appear in the late stages, usually open up the disease.

Hemorrhages into the skin and mucous membranes are especially frequent, which cause it often to be diagnosed as scurvy or purpura hæmorrhagica. The swelling of the spleen is moderate, the enlargement of the lymph-glands is at times during the life of the patient scarcely noticeable, though the necropsy constantly reveals them, as well as changes in the marrow of the bones. The phenomena of the hemorrhagic diathesis, which are frequently associated with fever, may at times set in earlier than the alterations in the blood. The blood presents a very characteristic picture. The white corpuscles are increased, which may reach the greatest number ever noted, so that they may almost be as numerous as the red ones. This increase affects only the mononucleated elements, which in size may vary greatly, with large lymphocytes as well as small ones. The course of these cases is usually very tempestuous and occasionally even in a few days, at the most a few weeks, they terminate fatally.

In chronic lymphæmia the disease seems to pursue a much more chronic and progressive course; it is very closely connected with certain forms of pseudo-leukæmia. According to Troje there is often a pseudo-leukæmic or "an aleukæmic" preceeding stage. And like pseudo-leukæmia, these cases are not sharply distinguished from "malignant lymphoma" and "lympho-sarcoma." As in most cases of pseudo-leukæmia, these begin with swelling of the cervical lymph-glands, which lymphomata, gradually extending and enlarging, form the most prominent and striking clinical characteristics.

In the marrow there is lymphoid hyperplasia; even in those cases where but slight changes are to be noted in the spleen and glands. These changes may exist in the organs without a leukæmic state of the blood being present, but sooner or later a migration of new formed cells takes place into the circulation. Then not rarely one may follow the gradual increase of the colorless corpuscles. These cells are strikingly alike, and there is a uniform increase of the small lymphocytes, along with which the other colorless elements seem to disappear. The course of these cases is, in general, much more protracted than in acute leukæmia. If the blood has become leukæmic, then the most manifold complications, as hemorrhages, purpuric manifestations, hemorrhages from mucous surfaces, etc., sooner or later close the scene.

Scurvy is also quite similar in its purpuric eruptions and hemorrhage from mucous surfaces. McCall Anderson—"Diseases of the Skin" p. 475—gives a good differentiation between it and purpura.

PURPURA.	SCURVY.
1. Generally a sporadic affection.	1. Generally endemic or epidemic, owing to many persons living under the same hygienic conditions.
2. Though favored by irregularities of diet, has no connection with a deficiency of fresh vegetables.	2. Diet deficient in fresh vegetables or some substitute for them.
3. Sets in rather suddenly, and not preceded by manifest ill-health as a rule.	3. Sets in slowly and insidiously after a varying period of debility.
4. Patient has a comparatively healthy appearance, unless the disease is the result of long-continued or profuse hemorrhage.	4. Peculiar dirty, earthy pallor of countenance.
5. Gums healthy. (Not always, by any means. But not spongy, ulcerated or breath fetid).	5. Gums swollen, spongy, and tending to bleed. (In pupura hæmorrhagica the gums at times bleed, are hemorrhagic-infiltrated, but are not ulcerated or spongy).
6. No painful swellings of the joints or other parts.	6. Painful, hard swellings of the flexures of the joints (especially the ham and elbow), and beneath periosteum of the tibiæ, *common*.
7. Hemorrhages from the mucous surfaces common, into the serous cavities more rare.	7. Hemorrhage into the serous cavities (pleura, pericardium, etc., more frequent than into the mucous surfaces.

In the greater number of text-books on the practice of medicine but little stress is laid on the possibility of purpura hæmorrhagica or a symptom complex very similar, complicating or forming a part of certain blood diseases, as pernicious anæmia, leukæmia, Hodgkin's disease, scurvy or acute leukæmia. This at times may be very confusing and embarassing, unless one be alive to the possibilities. In all cases with pronounced purpuric manifestations one should, among other things, look into the state of the patient's blood. I do not mean to say that this class of diseases is the only cause, for one might quickly correct that by glancing into any work on practice, but it is a chapter which has not been as strongly emphasized as it should.

RESORCIN, GONORRHŒA, ETC.

By Jos. Adolphus, M.D., South Atlanta, Ga.

RESORCIN was first made from some vegetable gums, *e.g.*, asafœtida, guiacum, etc., by dry distillation. It is now made from benzine, a derivative of coal tar. Resorcin is a remarkably valuable medicament in the treatment of all pusy inflammations of mucous membranes, having evinced itself a good local medicament in gonorrhœal diseases

after the first forty-eight or sixty hours of the appearance of the disease, used as an injection of the strength of 4 to 6 grains to the fluid ounce of water. In this disease, when used as it should be, not too strong or too weak, and retained in the urethra two to five minutes, it has afforded me the most satisfactory local treatment of any I have used heretofore. It will produce the best and most satisfactory results if it is injected with a black rubber penis syringe in good order, and the fluid a little hotter than the blood, repeated three or four times daily, and once or twice at night. If the injections are too strong the results obtained from them will be disappointing on account of the irritant effects they cause on the mucous membrane of the urethra. Many physicians after using resorcin in gonorrhœa discarded it on account of the irritations it caused and the aggravation of all the symptoms, as well as provoking in some cases orchitis and sometimes epididymitis. When the injections are only of moderate strength they afford the best results. I hardly ever use an injection of over 5 grains to the fluid ounce of water; then the results obtained are quick diminution of pus and scalding pain on urination, no cordee or painful erections. I am sure strong injections of any kind are liable to cause stricture of the urethra.

As a local application on the skin in eczematous eruptions, and other skin troubles of the kind wherein the skin is highly sensitive and infiltrated, I use resorcin in fine powder, 30 to 60 grains, well rubbed up with a mixture of equal parts of nice white vaseline and wool fat. Apply by rubbing this ointment on the parts, and cover with a clean, soft rag. Apply twice daily; use only wool soap to wash the skin.

When the gonorrhœa has become chronic, and the urethral discharges are more mucus than pus, I add a little chloride of zinc to the injection, about 1 or 2 grains to 4 ounces and order it to be used hot. I often succeed in curing these cases if the injection is retained five minutes each time, twice a day. The syringe must be a good one, so that the injection can be forced into the urethra and expand it so completely as to allow the injection to bathe every portion of it and act on the parts, for this is the only way the disease can be antidoted and the gonococcus destroyed.

The urine must be kept alkaline or neutral with Rochelle salts, the bowels kept only soluble, so as to have an action every day. The food must be non-irritating, and easy of digestion and assimilation. Meat diets, too freely indulged in, must be interdicted, in fact, only a small portion of meat of any kind in the daily food must be taken. Vegetable food is best, as rolled oats and wheat, rice, good bread and fresh butter, plenty of milk, buttermilk, not much tea or coffee, but a little if the patient has used either freely. No spirituous or fermented beverages. Abandon copulation and live a temperate, manly life. If eggs, oysters and such food provoke amorous feelings they must be avoided rigorously. I know that one copulation will so badly set back a case that was doing well fast, as to discourage most heartrendingly the patient and delay for a month any more improvement. This is a frequent cause why many cases of gonorrhœa do not get well, and it is best to preach this fact to your patient with earnestness.

I know, also, that a bout on a drinking spree will set a patient back a month, and that a hearty gormandizing at a banquet will do the same.

Some specialists are badly in need of this kind of information, and young doctors must be informed of these facts to enable them to do the best work.

Gonorrhœa in women is a difficult disease to cure, and the treatment must be of a special nature in methods. In fact, many a woman may give a man a gonorrhœa after she thinks herself well, and many a doctor who has treated these cases has been confounded on account of this misfortune. I must reserve the balance of my subject till another time.

NEWER THERAPEUTIC NOTES.

By J. Howe Adams, M.D., Overbrook, Pa.

1. The Surgical Treatment of Sciatica.—2. Acute Endocarditis Successfully Treated with Phenacetin.—3. Points on the Treatment of Epidemic Catarrh.—4. Ergot in the Ordinary Sore Throat of Phthisis.—5. Remarks on the Treatment and Prognosis of Pneumothorax.—6. Essential Tachycardia.

THE SURGICAL TREATMENT OF SCIATICA.

The following case of sciatica is one which had failed of cure at the hands of the medical men, and consequently the question of operation was considered. In the hands of most surgeons the operation which is the most successful in the treatment of this painful condition is that of nerve-stretching.

Although sciatica is essentially a neuritis and easily accentuated by cold, nevertheless the nerves need not be swollen; on the contrary there are many cases in which the nerves are found apparently in a normal condition even after section. It is of the greatest importance that every medicinal line of treatment should be carefully tested before the idea of operation should suggest itself to the physician, for undoubtedly these cases often fail of cure simply because of the lack of perseverance.

Now as to the details of this case: This man has suffered for some time and no amount of medical treatment has done him any real good or, in fact, given him the slightest relief. Thus the case becomes purely a surgical case requiring operation. In the operation, first comes the exposure of the nerve itself, which is not a difficult matter, as it consists in making an incision about midway through a line drawn from the tuberosity of the ischeum to the great trachanter, cutting through the skin, superficial facia, and deep facia. The incision may be about 4 inches long; pushing aside the biceps muscle the nerve is readily found. In grasping the nerve it is preferable, I think, to use the finger, and pull with a force of anywhere from 40 to 70 pounds, it breaking usually at a force of 80 pounds, which pressure is rarely given from the force of the finger. Now this may seem to you a very simple case and one in which little care is required as regards the antiseptic precautions, but let me assure you that it should receive the greatest of care.

In pulling the nerve pull in both directions, that is, from the knee and from the buttocks, the former being usually done for the relief of spasm, the latter for pain.

As to the effect of the stretching: It is a perineuritis and by stretching it breaks up the adhesions, the congestion of the vessels is removed, and thus it acts as a tonic for the nerve, and while I give you these as the probable results, still we must confess that as yet the true effect is yet very little understood. In doing this operation it is often necessary to make a couple of small slits with your knife to release the adhesions which have been formed. And as to the height at which you stretch the nerve, it seems to me to be more beneficial, as it does to many others, that the higher up the operation is done the better the results. We continue our traction for the fraction of a minute, and while it is safe to lift the pelvis and leg by the nerve, still it is safer not to, as there is a possibility of

tearing it, with the result that you would get paralysis of all the muscles supplied by the nerve.

As to the dressing: It is, surgically speaking, only a superficial wound, and requires merely suturing; then powder the wound with iodoform and place upon this several layers of iodoform gauze, then some bichloride gauze and cotton, and the dressing is complete.

ACUTE ENDOCARDITIS SUCCESSFULLY TREATED WITH PHENACETIN.

This patient, a woman, aged nineteen, white, single, was admitted to the hospital with the following history:

Her family history was negative; in her personal history she had always been well until a month ago, when she had a chill. She has always been a hard worker. At the time of the chill she had general pain, and a few days later this was localized in the joints and back. Later the pains attacked the back of the left thigh in the course of the sciatic nerve, and she noticed that she was short of breath and at times she felt unable to get up or down stairs.

In a week pain appeared in the left chest, dull in character, and at the same time cough developed, but there was no expectoration. At night she sweated considerably. She lost weight fast, her appetite was poor. Her general appearance was typhoid in character, the tongue red and dry, the pharynx a little inflamed, but with no pain on swallowing.

The left apex of her lung was dull on percussion; the fremitus was increased and vocal resonance increased and a large number of harsh and a few mucous râles were heard.

The heart impulse was normal, the apex beat normal in position, and a double murmur was audible, both aortic and mitral systolic.

The examination of her liver was negative. Spleen was enlarged and sore on pressure. There was pain in the left hip, shooting down the course of the sciatic nerve. A bedsore developed on the right buttock.

A short time after admission she had a chill, when her temperature went up to 104°; she was sponged with resulting fall of temperature. The urine was dark in color, acid reaction; specific gravity 1,028, containing no albumin or casts.

Her treatment consisted of rest in bed, milk diet, ammonium muriate, 5 grains, every second hour, half ounce of whiskey every fourth hour, blister down course of the sciatic nerve. The bed sore was dressed in the usual antiseptic way.

The chills continued daily, sometimes twice a day, and the temperature rose as high as 105 4-5°. During these chills she had universal pain.

Three days later she had much sharp pain in her left side in region of the heart. The bowels were moved by an enema; she was then ordered calomel, 1-6 grain, bicarbonate of soda, 5 grains, every two hours, until one grain of calomel was taken. In the evening her temperature rose to 105 3-5°, when she was sponged, which was followed by reduction of temperature.

Two days later she was not so well, her pulse was weak and rapid, although the bed sore had improved. She had another chill; the temperature rose to 104½°; she was sponged, this time with no effect; and in an hour was sponged again without effect. She was then given 5 grains of phenacetin, which reduced her temperature to 97 4-5°.

The heart murmurs at this time were very loud and rough and were heard all over the chest, and a distinct thrill could be felt. Pain continued over the region of the heart; the pulse was irregular and very rapid.

Next day large doses of quinine were exhibited, with no effect. The blood was then examined, with negative results.

Two days later the temperature rose to 105°, after a severe chill. Sponging again failed to reduce it, but again phenacetin, in 5 grain doses, lowered it to 97°, causing profuse sweating and a very weak pulse. Atropine in dose of 1-120 grain, was given hypodermically, and half ounce of whiskey. These measures and hot water bottles checked the sweating, and the temperature became normal. The pain along the course of the sciatic nerve disappeared, leaving only a slight soreness.

Next day but one she complained of severe cough, and examination of the lungs showed that the percussion note posteriorly at both bases was dull; crackling râles were heard all over, but expectoration was copious.

For the next few days her condition remained about the same. Chills continued daily, sometimes twice a day; temperature rose to 105 1-5°. Phenacetin in small doses was administered, which reduced it gradually with no bad results. A short time after the chill she noticed she was paralyzed in the left arm, and her pulse was very quick and irregular. The urine was again examined, with the same result as before, except that pus and blood were found, but no casts. All former treatment was stopped, and she was ordered iodide of sodium, 5 grains; acetate of sodium, 15 grains; tincture of digitalis, 10 minims; tincture of belladonna, 10 minims, to be given every fourth hour.

A week later the heart was examined, with the same result as before. She had a chill, the temperature rising to 105°. The bowels were constipated and a small laxative pill was ordered three times a day. The cough had cleared up and her condition was improved.

The next week she was much better, the chills having ceased. The pulse was stronger and her appetite had returned. Her heart was examined, and the murmurs were found to be less distinct. Then all the former medicine was stopped except the laxative pill, and she was ordered compound tincture of gentian, 2 drachms daily. The heart was again examined and a very marked change noted, the murmurs having become very much softer and the action more regular.

Three weeks later she was feeling much better and began sitting up. Her lungs had cleared up; she had no pain. The shortness of breath had all disappeared. The heart's action was regular and the murmurs very soft, but they still persisted over both aortic and mitral areas.

Some time later she felt so much better that she desired to go home.

The interesting points during the height of the disease were the severity of the chills, which occurred daily, and often twice daily; the good results of small doses of phenacetin (grs. 1¼); the sudden loss of power in the left arm with so rapid a recovery; and the change in character of the murmurs as she improved.

POINTS ON THE TREATMENT OF EPIDEMIC CATARRH.

"La Grippe" is undoubtedly a specific disease, distinct from anything which I have ever seen before, and is in all probability the result of a specific poison. During the prevalence of a widespread epidemic it is a matter of the greatest difficulty to decide whether a disease is or is not contagious; but I have so frequently seen this affection apparently pass from one member of a family to the other that it seems to be imparted from man to man.

I have had two fatal cases in my practice. In one death occurred about the tenth day. At the autopsy I found widespread pneumonia with purulent pericarditis and pleuritis. In the second case an autopsy was refused, but the tendency to a formation of pus in the internal cavities was even more marked. The patient, about thirty years old, was recovering from "grippe," and, contrary to my emphatic orders, went out. On Wednesday, January 15, he was taken with a chill, followed by intense fever and general systemic disturbances, with evidence of respiratory disorder.

I saw him January 20, suffering evidently from a widespread pleurisy, apparently involving especially the diaphragm, and most pronounced on the right side, coincident also with pericarditis. On tapping the right chest we obtained about 12 ounces of thick inodorous pus. The pus was apparently not diffused in the pleura, but bound into local aggregations, at least on moving the trochar several times with some force at various portions of the pleural cavity several ounces of pus spurted rapidly into the aspirating bottle. The fluid obtained by tapping the pericardium was not distinctly purulent.

The treatment which has given me the best results in "La Grippe" has been very much on general principles; namely, to give a free sweating and follow this with quinine, and then treat the pulmonary and other symptoms as they arise. A mixture of pilocarpine and morphia has seemed to work better than antipyrin, and in nine cases out of ten all that has been necessary is to soak the feet, put the patient to bed, tell him to take a teaspoonful of the following prescription, then insist upon the patient staying in bed forty-eight hours and being exceedingly careful afterward about going out, either staying in the house altogether or using a close carriage:

℞. Pilocarpine hydrochlor..... gr. ss
Morphine sulph..... gr. 1-3
Aquæ ..... f ʒ iij.
M. S. Teaspoonful every quarter of an hour as directed.

Sitting in draughts, standing at washtubs, or other similar practices, have been, I think, responsible for most of the deaths. The lung complications were especially controlled by free counter-irritation, and the following mixture I am sure worked better than the ammonia when used by itself. Especially during this epidemic have I become convinced that apomorphine is a valuable expectorant:

℞.	Amonii chloridi.....	ʒ ij
	Apomorphone hydrochlor.....	gr. I
	Mist. glycyrrhize comp.....	
	Syrupi.....	ad fʒjss

M. S. Dessertspoonful every two or three hours.

Severe purging has been a common phenomenon. In my experience it has been best controlled by a combination of the subnitrate of bismuth and carbolic acid, with or without opium. Instead of making this into an emulsion the two well-incorporated substances may be put into capsules. A capsule containing 10 grains of the bismuth and 1½ of the acid may be given every one, two or three hours, according to the exigencies of the case.

ERGOT IN THE ORDINARY SORE THROAT OF PHTHISIS.

The following cases of the use of this drug in this condition are interesting. The first case was a man, aged thirty-five; was admitted in an advanced stage of phthisis. A few days after admission he complained of sore throat, which in spite of treatment grew steadily worse, until finally he could hardly swallow, so great was the pain. He also complained of great dryness of the throat and mouth.

On examination the pharynx was found to be greatly congested and a few small ulcers were seen. One day the man had a slight hemorrhage, and the fluid extract of ergot was given. The next day the patient said his throat was much better and asked for some more of the "brown medicine." He was put on this drug, M xx, three times a day, and in five days said his throat was perfectly well. A thorough examination of the throat could not be made on account of a partial anclysosis of the left tempero-maxiallary articulation, and great tendency to vomit. The patient lived for about two weeks, but had no return of the sore throat.

The next case was admitted suffering from phthisis, and complained of great dryness of the mouth and throat and some pain on deglutition. He was at once put on fluid extract of ergot, M xx, three times a day, and in four days he said that his throat was perfectly well.

The third patient was admitted in an advanced stage of phthisis, complaining of great thirst, parched mouth and throat, and pain on swallowing. She was put on ergot, M xx, three times a day ,and in four days the pain on deglutition had disappeared, and the dryness was much less marked.

The next man was aged thirty-four, with a slight tubucular involvement of the left apex. The patient complained of sore throat. An examination was made, which showed the mucous membrane very much congested and two small ulcers. Local treatment was tried for nearly a week, but without avail. He was then put on ergot three times a day, and in about eight days the throat was so much better that the patient asked for his discharge.

An advanced case of phthisis was next treated. He complained of sore throat and great dryness of mouth and throat. Local remedies were tried for several days, but the throat continued to grow worse. He was finally put on ergot, M xx, three times a day, and in four days he could swallow without pain and the dryness had almost disappeared

An Irish woman was admitted with a moderate tubercular involvement of both lungs. She complained of a constant dry throat and burning pain; no ulcers were seen on examination. The patient was put on the fluid extract of ergot, M xx, three times a day, but at the end of three days there was little or no improvement; the dose was then increased to half a teaspoonful, but with no better results. Finally she was given 40 minims. In a few days a slight improvement was noticed, but she continued to suffer from her throat for about ten days.

There have been other cases similar to these quoted, and from three to five days after the exhibition of ergot in 20 minim doses, three times a day, they declared that their throats felt perfectly well.

With the exception of one case all the patients were in an advanced stage of phthisis. Cases I. and IV. were the only ones in which ulceration was present. The cases were all of them pretty well marked ones, and the relief after treatment in all but one case, unquestionable. Before the exhibition of the ergot in most of them, other methods of treatment had been tried with satisfactory results. After cessation of treatment the symptoms had a tendency to recur, but another exhibition of ergot again alleviated them. However, with each recurrence, the results of treatment seemed to be rather less pronounced, so that it is possible that in time it would be of no avail; though one case has been under observation for more than two months, and the treatment continues efficacious. The effect upon the fauces when there was much congestion was very apparent, for in a few days the congestion almost entirely disappeared.

REMARKS ON THE TREATMENT AND PROGNOSIS OF PNEUMOTHORAX.

The prognosis of pneumothorax or pyo-pneumothorax is always serious. It is a grave affection. I have no doubt that many cases of sudden death, ascribed to phthisis and other causes, are in reality due to an escape of air into the pleural cavity. On the other hand, an escape of air may take place with no marked symptoms, or without any symptoms at all. In the latter case the reason is that the lungs are already so crippled by disease that the pressure is scarcely felt. The lung is already incompetent and it is difficult to do it any harm. The lung may be already solidified and a large quantity of air cannot escape into the pleural cavity, or if it could, it will do no harm. In cases where sudden death occurs, it may be that there exists bilateral disease, and there is an escape of air into the sound lung. In the early stages of phthisis one lung may be comparatively sound, and because it is so a great deal of air may get into it and cause sudden death.

Now it is a very singular fact, but one that is well attested, that in certain cases of pulmonary phthisis, pneumothorax has been followed by improvement in the condition of the patient. This may be attributed to the anæmia of the infected parts produced by the pressure. It was in consequence of this fact that a certain well known surgeon suggested the inflation of air into the pleural cavity in cases of pulmonary phthisis.

Now the treatment of pneumothorax will not occupy a very long space. Where its outset is attended by dyspnœa and collapse we must give stimulants, such as ether, camphor and musk. A hypodermic under such conditions is valuable, and morphia in repeated small doses may be given, 1-16 or 1-8 of a grain every two or three hours, in stimulating doses. In addition we may use dry cups. Then if the symptoms subside it is best to abstain from immediate operation, relying on stimulants and morphia, and of course food. Why should we abstain from immediate operation? The pressure of air in the pleural sac is always injurious, and yet it may suffice to close the pulmonary opening and cause it to heal, while if we remove the air the opening may not close and the sac again be filled.

But if on the other hand dyspnœa continues to be an urgent symptom, we should remove the air. This is done through a tube which conducts the air to a jar containing water. If, as is generally the case, there is fluid as well as air in the thorax, we may make an exploratory puncture. Many times the fluid is found to be pus; then incision and drainage are indicated. If the fluid is serous wait, if the symptoms are not urgent. If we remove the fluid there is danger that fresh quantities of air be introduced through the pulmonary opening; and if we wait there is the best chance for the fluid and air to be absorbed. I am speaking now of the treatment of the early stages of the disease. Wait in hopes that the opening into the bronchus will be permanently closed.

Now suppose that the patient is in the advanced stages of phthisis. You are obliged to advise either for operation or against it. Now I hold that no one can lay down rules for you to follow, but if the pressure is evidently injurious and seems to threaten life, I would operate even if it were the advanced stage. It is not necessary to resect the ribs; make an incision through the soft parts between the ribs. It may be done without etherization. A little cocaine or eucaine, or even a little distilled water may be injected under the surface. For my part I would prefer the eucaine for this purpose.

ESSENTIAL TACHYCARDIA.

In this little understood disease the abuse of coffee, tobacco and alcohol are predisposing causes. Certain physical and cerebral conditions are also considered as predis-

posing causes, as are occasionally fatigue, sudden cold and great emotion. These phenomena are constant. First: A more or less prolonged acceleration of the heart's action. This acceleration is frequently enormous, being from 150 to 300 heart-beats in the minute; it is frequently impossible to distinguish the first sound from the second. The rhythm is that of the fœtal heart. There may be a systolic murmur at the apex. The sounds of the heart are very clear and preserve their strength. Second: A diminution of the arterial pressure. The pulse may become imperceptible notwithstanding the apparent over-action of the heart; this is in contrast to exophthalmic goitre, where the pressure of the blood and heart's force are lowered simultaneously. Third: Urinary symptoms; there is a decided diminution of the quantity of urine. Very often this anuria is replaced by a polyuria. There is notable increase in the urea. Besides these three constant symptoms there are others which occur less constantly; the patient is pale and then becomes cyanosed; a true venous stasis supervenes with dilatation of the right heart. Nervous symptoms supervene in the shape of vague pains throughout the body, insomnia and a constant agitation. Notable changes take place in the heart during acute asystole. The patient feels fatigued for a few hours but is about his work when suddenly he becomes cyanotic. If the heart is examined it is found to be much dilated, extending from the left mamillary line to the right border of sternum. Thoracic symptoms, grave in character, may supervene. Cough, viscid expectoration, sometimes bloody, dyspnœa, which may be paroxysmal. Percussion denotes irregular dullness, due to pulmonary congestion. The abdominal symptoms are enlargement of spleen, liver and kidneys, with ascites and diarrhœa. There may be œdema of legs or general anasarca. Sometimes there are powerful sweats as the critical ending of an attack Elevation of temperature is constant during an attack, and may be from 1 to 3°. This fever is of a truly nervous origin, as is often observed in hysteria. The duration varies from a few hours to several weeks. Sometimes fatal symptoms occur in a few hours. On the other hand, an attack may last for several weeks and the patient be about his usual work. The course of the attack is divided into three periods; first, a simple attack of tachycardia without asystole; second, a second period of tachycardia with asystole, consecutive with fatigue of the heart; third the period of decline. This last may be sudden, the heart beat quickly dropping from 200 per minute to seventy per minute. The nature of the disease is still unsettled; some consider it a lesion of the sympathetic, others of the pneumogastric, and still others consider it of central origin.

During the attack the patient should be at rest in bed. In some cases compression over carotids or over the pneumogastric is of service. Some spray chloride or methyl over the præcordia, others apply the refrigerant with a compress. Three drugs are of value—morphia, used hypodermically, digitalis and belladonna. In the interval the treatment may be continued with the following prescription:

Rx. Sulphate of quinine..... each 1½ grains.
Extract of ergot..... 1-3 grain
Extract of nux vomica.....

Make into a pill.

S. Two pills three times daily.

Cycling and Action of the Heart were considered by Dr. M. Mendelsohn in the Berlin Medical Society during a discussion on the hygenic value of wheeling. The following noteworthy statement was made: The effect which wheeling may have on the blood-pressure and thereby on the heart itself, is of the greatest importance. In his own practice, as well as in that of Professor Oertel, a large number of observations were made in which an unfavorable influence on the heart was caused by wheeling. The relaxation and functional debility of the cardiac muscle were easily demonstrated, and the number of sudden deaths during wheeling are increasing, due to cardiac strain. As another warning against the excessive use of the wheel, especially during childhood, we may mention the observations made in France during the yearly enlistment of recruits. It was found that a large percentage of those recruits, who were expert wheelmen, had to be declared unfit for military duty on account of morbid changes of the heart muscle, or from the occurrence of marked changes in the spinal column, the thorax, etc.

THE MODUS OPERANDI.*

By Robert T. Morris, A.M., M.D.

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The case that I shall operate upon to-day is one of the common types of cases of appendicitis. It is not so far advanced in complications as many of the cases that we see here, but the patient is a physician, who states that his attacks are troublesome enough to interfere with his work, and so he wishes to have the operation done now rather than wait for what may be a more severe attack. In his case the condition began about one year ago and followed an indiscretion in diet; the patient had colic, with pain and tenderness at McBurney's point. The pain was localized. The bowels moved and the pain disappeared at the end of forty-eight hours. At the end of three or four weeks he had a similar attack. Since then he has had four, five or six mild attacks, all of them being well defined. Upon palpation of the appendix I do not find it large. I saw him at the end of an acute attack, and found the distal fifth of the appendix distended with interstitial exudation. This exudation made the appendix tense at this point. Just why this process should occur in this patient I do not know, but I suppose we will find a concretion causing the repeated attacks without any extensive infection. After one attack there follows a destruction of the mucosa of the appendix, the resulting scar tissue closes the lumen in part or in whole, so that patients have mucous inclusion in more than 80 per cent. of the cases. We find phosphatic or fœcal concretion in about 8 per cent. Mucous inclusions occur in rather more than 80 per cent. of those patients who have had one or more attacks. The inner tube of the appendix is anæmic from compression and cannot strain out bacteria well, and its cells readily undergo toxic destruction from bacteria. The polynuclear leucocytes throw out nuclein and so give protection when there is free circulation, but with compression anæmia is present; consequently the bacteria are free to carry on destructive processes. When polynuclear leucocytes can be carried freely to the place of infection they pour out nuclein in large quantities, and it is difficult for the bacteria to pass the nuclein wall; consequently the bacteria, confined within a small territory, commit suicide with their own toxins. The fluid becomes practically sterile, but containing spores or their baceria, ready to spring into activity again. The time may come when so much fluid becomes dammed up that finally the appendix may rupture and the contents spread. This happened in a patient whom you saw last week at this clinic. A strong man who had had a large number of attacks, though none of them were severe, and yet in twenty-four hours he suddenly entered a most desperate condition. The appendix had ruptured, its contents had escaped, and, at the same time, a number of small abscesses had formed, and there was a gangrenous omentum and an active infection. This patient is making an excellent recovery.

I operate by the blunt dissection method, and use no other retractors except the fingers. Destroy pus as you reach it with peroxide of hydrogen, and as fast as you come to it; in that way the chief bacterial bearing fluid is destroyed, and you need have no fear of breaking up adhesions widely. The reason that the removal of the appendix is advised in pus cases is that a mucus fistula may persist; concretion may remain, or a sloughing appendix may give rise to a long train of symptoms if the appendix is soft. I prefer to break up any adhesions, remove the appendix and place in a small drainage wick. If iodoform gauze packing be used there is danger of iodoform poisoning; this is quite frequent when the gauze is in contact with the peritoneum. A pulse of about 120 with slight ele-

* Held at the Post-Graduate Hospital, April 1, 1899.

vation of temperature, say 101°, should cause one to look out for iodoform poisoning in any case. The test is, add a pinch of calomel to a specimen of urine and find the iodide of mercury resulting; this occasions a brownish reaction, and enables us quickly to tell if the patients suffer from iodoform poisoning. In my cases I do not use iodoform gauze. I never use gauze packing on account of the plastic lymph exudation causing intestinal adhesions and a long train of symptoms, and especially on account of the danger of hernia in a wound left open for gauze packing.

In this case I shall find no adhesions or pus. This will be one of the simplest cases I have operated upon this winter. My advice to him was to wait until more severe symptoms set in, provided that he could be constantly under observation, but he does not dare to wait longer. In palpating the appendix stand on the patient's right, using three right-hand fingers to feel with and three left-hand fingers placed upon these to press with. The fingers that are to do the feeling are pressed by means of the three others down under the border of the right rectus abdominis muscle at the level of the navel, and slowly drawn toward the examiner. My sole landmark, the ascending colon, is then felt to slip out from under the fingers, and by repeating the process toward the cæcum we soon come to the end of the cæcum, and there begin to hunt for the appendix by rolling the cæcum from one side to the other of the finger tips. The proximal end of the appendix is found near the distal extremity of the cæcum, and we then follow the rest of the appendix in any direction. The proportion of appendices that cannot be palpated will become smaller and smaller as the finger tips become educated. This is a small, soft appendix without evidences of general infection. From the fact that there is so much interstitial exudation at the tip of the appendix, I presume I shall find some small concretion there causing the acute attacks.

Over the site of the normal appendix, in a line which follows the trend of the external oblique, the skin is picked up between the fingers, and with a snip of the scissors an incision an inch and a half long is made. The points of the scissors are inserted in the external oblique aponeurosis, and the scissors then being forcibly opened the external oblique aponeurosis is split in the normal line of traction. The points are next inserted in internal oblique and transversalis are spread in such a way as to split these muscles in their normal line of traction, so that up to this point no structure has been cut except the skin. The transversalis facia and peritoneum are picked up on a hook and a guy-line is inserted through these structures. The guy-line is a strong strand of catgut; the artery forceps attached to one end keeps it out of the way by means of its weight. When we are ready to close the wound an assistant, making strong traction on the guy-line, pulls the retracted margins of the divided transversalis and internal oblique aponeurosis up into sight so easily that they can be sutured with perfect accuracy. The retro-peritoneal glands are much enlarged. If the appendix is not at once felt by the finger inserted into the abdominal cavity, the ascending colon or cæcum is pulled up through the wound. The colon and caecum are much lighter in color than the ileum, and are definitely distinguished by three whitish muscular longitudinal bands, which lead straight to, and exactly at, the appendix. If we are going in the wrong direction we will notice little tabs of fat, which eventually merge into great omentum. The cæcum is bare of fatty tabs. The peritoneum is still congested. The muscular longitudinal white bands are converging, as you see, and, at this point, is the appendix. And here is the hard concretion as diagnosticated. I will now ligate the mesappendix. Mesappendix is a term which I like better than meso-appendix; it is more euphonious. I will now cut away the mesappendix, and we come to the cæcum. You should keep everything clean; I do not like to see blood in this operation. I shall now scarify the peritoneum of the cæcum at the base of the appendix, in order that I may be sure of a plastic exudation following. The muscular and peritoneal coats of the appendix are divided in a circle close to the cæcum, and the tube is then ligated with a strand of fine catgut, and the appendix is amputated distally from the ligature. The next thing is to bury the stump of the appendix by bringing the walls of the cæcum together over it with a puckering-string suture. The opposed peritoneal surfaces will adhere in a few hours so firmly that no harm will result if the stump perforates under the ligature, because it is effectually sealed in. It is better to scarify the surfaces of the peritoneum, which are to close in the buried appendix stump. The stump of the appendix has been invaginated and sunk within the cæcum. Aristol is placed on it, which makes a lymph coagulum protective. Now that we are ready to close the abdominal wound, an assistant pulls up strongly on the guy-line, and that brings into view the margins of the internal oblique and transversalis aponeuroses, the transversalis facia and peritoneum. All these structures are closely approximated with one or two sutures. The keystone to the inch-and-a-half-incision method is the guy-line. After the deep structures of the wound have been closed with sutures the guy-line is cut away, and the margins of the external oblique aponeurosis are approximated by means of the same suture used to close in the deeper part of the wound. The last step in the operation consists in closing skin and fat in such a way as to make an evanescent scar, and this cannot be done unless tenacula are inserted into the angles of the wound, and the skin put upon a stretch until skin margins are drawn absolutely together without wrinkling, and without the interposition of any sub-cutaneous fat, so that the sub-cuticular suture can be inserted. The reason I use the sub-cuticular suture is that it will not carry the staphylococcus albus into the wound; so it avoids the danger of infection by the staphylococci. My rule of one-and-one-half-incision and one-and-a-half-week confinement caused considerable comment over the country a few years ago; but now many of those who criticised adversely are using this same short incision. One patient, operated upon not long ago—he was a medical student—came back to the next clinic a week later. These patients are practically well as soon as they are through the operation. We dress this wound with dry aristol, then apply a small gauze pad for dressing. Each year the medical death rate from *appendicitis alone* is above 50,000 in the United States, and yet this operation for appendicitis, with no death rate as yet in my hands, is one that is giving rise to a great deal of adverse criticism and comment. It represents a curious trait of human nature.

I will now split the appendix and pass it around among you. As I cut in there appears a yellow material which is often fatty, frem retrograde metamorphosis of the cells; but here there is so much that I think it is mostly fœcal matter in it. Apparently it is a concretion, partly phosphatic, and partly fœcal, of the size and shape of a musk-melon seed.

(Answer to a question from a member of the class).

Regarding the final results of this kind of an operation, the pain that follows is due to the adhesions that were present before operation. If there be adhesions present at the time of operation, or if there be faulty technique, one may be disabled for life from adhesion. Disability from this cause is very common, and because patients suffer so much is another argument against waiting until adhesions form before having an infected appendix removed,

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BIT OF PHILOSOPHY.

What's the use o' lyin'—
Cryin'—sighin'?
What's the sense o' fussin'—
Mussin'—cussin'—
Does the savages' complainin'
Stop the rattle o' the rainin'?
Does the tormentin' an' teasin'
Make the winter quit a freezin'?
Quit a-blowin'?
Quit a-snowin'?
Does the grumblin' an' the groanin'
Do a bit toward atonin'
For the miserable moanin'
Thro' the trees?
Does the scowlin' an' the growlin'
Stop the prowlin' an' the howlin'
O' the breeze?
Won't the sunlight be the brighter
If we keep our faces lighter?
Don't the dreary day seem longer,
And the wailing wind seem stronger,
If one frets?
Make the best o' all the weather!
Sing an' smile an' hope together!
Won't you? Let's!

The Medical Times

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EDITORS:

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The only thing any drug or any medicine can do is to remove obstruction, that the life forces may have a better chance to do their work. The real healing process must be performed by the operation of the life forces within us.—RALPH WALDO TRINE.

ARE OUR CHARITABLE AND REFORMATORY INSTITUTIOUS CONDUCTED IN A CHRISTIAN SPIRIT?

WE are nearing the close of the nineteenth century. Nearly two thousand years have passed since the GOD MAN, as those who claim to be his followers delight to call him, said: "Suffer little children to come unto me, for of such is the Kingdom of Heaven," and his sermon on the Mount enunciated those great principles of truth, of justice, of right living, which flow naturally from a recognition of the Fatherhood of God and the brotherhood of the whole human race as the corner stone, the pivotal point of the Christian faith.

It seems a strange question to ask at the close of the nineteenth century of the Christian era, Are we a Christian people? It is true the music of the church bell vibrates on the air from almost every hill top and valley, calling the people to the worship of God. Homes are erected for the poor and the aged, asylums and hospitals endowed for the sick and the helpless infants, and reformatories established to turn the wandering steps of the early violators of law back into the paths of virtue, making of them good citizens, useful members of society instead of a curse. Does public responsibility end here, or does it only commence, each member of every institution thus founded being individually responsible for the carrying out in all its integrity, not only the letter but the spirit which led to the organization and contributes to the support of the institution. Is it not in every sense of the word true that "public office is a public trust?" and the man or woman who neglects those plain principles of duty is recreant to the trust and fails in the performance of the very elements of that Christian faith in which they profess to believe.

It must be apparent to every observing mind, from the records of crime, of selfishness, of debauchery, so rife in our midst and which form a large part of the "news" served to the reading public with each issue of the daily papers, that the human race is not yet so far evolved from the animal as to crush out some of its lowest, meanest, most hideous and savage traits.

We are startled when some faithful public officer thrusts his probe through the fair and outward serenity of institutions erected in all good faith and in a Christian spirit for the benefit of society, and reveals the rottenness, the festering filth, the cruelty which has been developed there, unchecked through years, though under the very eye of those placed in power to carry out the intent of the law in its spirit and integrity. Where lies the fault for the existence of those damnable crimes upon the infirm, the feeble minded, upon helpless little children and the inmates of so-called reformatories, which Controller Morgan is just beginning to unfold, worse even than the dungeon horrors of Europe which more than a hundred years ago were revealed by the probe of John Howard and led to a partial reform? We answer most emphatically with the men and women placed in positions of responsibility, who were expected to know what occurred and to carry out in its fullness and integrity the intent for which the institution was organized and is supported by the public purse. No matter if the office is given them as a reward of social or party influence, no honorable man or woman would be willing to sink to the position of a mere figure-head, relegating all the duties of what was intended to be a place of trust, of responsibility to a subordinate, however faithful that subordinate may be considered.

Individually every trustee who accepts that office becomes a guardian of the institution, and so long as he retains that position, in morals if not in law, becomes *particeps criminis* in the abuses which exist there, if he fails in making an effort to detect them and raise his voice against them. And what is said of the trustees is applicable with even more force to the physicians connected with the establishment. They are in charge of the health, and even the lives, to a certain extent, of the inmates. Their duty is to them and through them to the public. They are in a position to

know the truth, and the failure to act upon the truth as it exists shows either a selfish desire for place and power or perhaps, through thoughtlessness, a reprehensible disregard of the obligations they assumed in accepting the trust. In the one case there is a selfish greed and a moral cowardice, and in both a violation of the Hypocratic oath and a manifest lowering of the dignity and usefulness of the profession. Discipline is of course essential in every institution, and no true physician would interfere with or permit, so far as lay in his power, an interference with a healthy discipline, but when that discipline violates the plainest rules of health and restricts the just authority of the physician in his own department it is his fault if he fails to present the real facts to the regularly constituted authorities. It is to be hoped that the inner working of public institutions, which is now being revealed, will lead to a more realizing sense of individual responsibility of all officials connected, not only with public but private institutions, more especially with members of the medical profession, whose failure in the honorable performance of a plain and simple duty has permitted to be concealed by the broad shield of their profession, under an autocratic authority, abuses which are a disgrace to humanity, and which have to a great extent nullified the good which might have been accomplished.

THE EQUALITY OF THE SEXES IN THE DEVELOPMENT OF THE HUMAN RACE.

IN a very able address, delivered by Dr. E. C. Spitzka before the Society of Medical Jurisprudence in 1898, the author brings substantial reasons, culled from the records of history, ancient and modern, and supported by biological science, fully justifying the legal disabilities of natural children, which now form a part of the fundamental law of almost all civilized nations. In the broken periods of history men and women of illegitimate birth have been the great disturbers of the public peace, inciting to war, usurping authority, reckless in government, fugitive adventurers, breeders of discord and corruptors of public honesty. The long black catalogue of crime, of reckless and selfish daring, of violation of every moral law, of revolution, trampling upon the rights of the masses, which can be traced directly to individuals of this class, stands out in bold relief on every page of ancient and modern history, until perhaps, the last century. Legislatures, taking facts as they existed, with the records of the past clearly before them as a part of history, have been compelled by the force of public opinion in the interest of justice, good government and public morals, to enact the laws as they now stand on our statute books in reference to the disabilities of natural children. But this action, the best probably that legislation can directly accomplish under present conditions, only deals with the present, but while it holds in check it fails to touch the real source of the trouble. That exists in the failure to recognize the entire freedom of woman and the absolute equality of both sexes in all the social relations of life. No social ban rests upon the father of an illegitimate offspring, but it is visited with terrible force on the mother and child. The mother, crushed beneath the weight of public scorn, her child stamped with an heritage of shame, either shrinks from society or in revenge for its slights and neglect turns against it all the bitterness of an outraged nature. A child brought up in such an atmosphere is apt to launch out upon a wild and reckless career, with no sense of individual responsibility, in the bitterness of its heart, for the penalties visited upon it, not from any fault of its own, but for those of its parents. It is true the more intelligent and settled state of society among the most civilized nations of the world lessens, to a certain extent, the great public danger arising from this element, but the danger is there, nevertheless, a constant disturber of domestic and social peace.

A friend at our elbow suggests that it is a question well deserving of the most careful study whether the nations of antiquity, most of which have perished from the earth, did not in some respects approach nearer a correct ideal of social life than those who have succeeded them.

In a province of Mexico there exists a remnant of the once mighty Maya nation, numbering scarcely a million of souls, whose origin extends so far back beyond the records of history as to antedate China and Egypt, and whose language, older than Sanscrit, has enriched those of the world. The records of this once mighty nation, which was old thousands of years ago, have been exhumed from the ruined temples and palaces of Yucatan by the distinguished explorer, Dr. Le Plongon, and a picture of their life, with their laws and customs, developed from the sculptures and the hieroglyphics on the walls and the earthern tiles. In this ancient race the line of descent was in the mother. The same custom or law now prevails with the Indians on the coast of Alaska, and in Burma, Siam and other localities in Asia. The child takes the mother's name instead of the father's, and hence the children are all legitimate.

Of course, said my friend, this is one sided, but after all, was it not more in accordance with

the laws of nature, intensifying the mother's example for good, and recognizing her all powerful influence in training the young mind upon every avenue of industry, and upon individual and national prosperity, than the custom which now prevails? There is evidently something wrong in the customs of society, in the great social power which holds it in a grip of steel, whose firm fingers can only be unlocked as public opinion, with its growing instinct of right, of truth and justice, weakens their grasp. No one can close the eye to the fact, as it looks at the progress of events during the past few decades, that the time is rapidly approaching when the equality of the sexes will be fully established in all their moral, legal and social relations; when woman will no longer be the slave of man's passion and compelled to bend to his iron will, but as the mistress of her own body, with her higher spiritual nature trained in the atmosphere of individual freedom, with all its rights fully recognized, take her true position as the mother of the human race, giving that bent to the young mind in its moral and mental training which will be felt through all time in every avenue of industry, and in the social and industrial prosperity of communities and nations. One great step in that direction, which will do more perhaps than anything else in solving the problem upon which so much depends in the physical, moral and intellectual development of the human race, and which can only be brought about by a consensus of public opinion, is the equal right of both sexes in indicating their preference for associates in the marriage state. It will be easily perceived, giving woman the privilege, which is now by a morbid sentimentality considered to be indelicate and from which, in the present state of public opinion, she naturally shrinks, to express her own feelings in plain and unmistakable words, would do away to a great extent with the old idea of their being in the marriage relation one head, one master, and that the man. Each respecting the other, both would form a unit, in which all warring elements would be eliminated, whose influence would blossom in rich fragrance and beauty, and yield a ripe and abundant fruitage in public and private life. We are entering upon a new century, in which the promise of development far exceeds that of any other century in all the eons of the past. Mind is everywhere awakening and unfolding in clearer light the harmonious laws of nature, in the observation of which the human race is mounting as upon a ladder, step by step, from the animal to the higher plane of spiritual life. Modern woman can bid farewell to the nineteenth century with the full conviction that the dawning century will open up to her great and still greater fields of usefulness, and, perhaps, the settlement of this great problem which has vexed the world so long.

ENZYM.

DR. OSCAR LOEW, a bacteriologist in the Agricultural Department of Washington, has published in a German medical journal a description of a newly discovered agent which he thinks, with other bacteriologists, may replace serum in the treatment of various forms of disease where that is now used. The new agent, which he says is similar to serum or antitoxin in some respects, and quite as potent, is manufactured without the aid of dumb beasts. Instead of introducing the deadly microbes into the blood of animals, and thus let the disease killing serum form, the noxious bacilli are confined in a glass jar, where they secrete a kind of ferment, which becomes so strong that it kills the very germs which make it, and even destroys their bodies. This fluid is the enzym, and is practically the same as antitoxin. In describing the new agent Dr. Loew says: "It has been known for a long time that certain bacterial growths in the animal body and in man will reach a point where they will cease, as of their own accord. In such cases the disease seems to run its full course, and then entirely die out of the system. According to previous theories this was due to acids, to noxious products or to the stimulation of the animal organism to itself produce a bacteria killing product. It was never noted that in such cases the whole bacillus growth became completely dissolved by the time the course of the disease had been thus run. When I observed this, about a year and a half ago, I concluded that the germs which became thus dissolved had themselves produced the material which accomplished their dissolution. I communicated my theory to my friend Dr. Rudolph Emmerich, bacteriologist, of Munich. We at once experimented upon a large scale, and produced enzymes.

"Our first enzym was produced by bacilli taken from ulcers formed in the disease known as pyocyaneus. A concentrated solution measuring one cubic centimetre killed, in from several hours to several days, many millions of bacilli of bubonic plague, cholera, typhoid fever, diphtheria and anthrax. Thus you see the pyocyaneus bacilli formed an enzym fatal not only to themselves, but to the germs of all of these other diseases, and doubtless to many more which future work will determine.

"We next experimented upon animals. A large dose of bacilli causing anthrax, that dread disease fatal to brutes and often to man, was injected into a rabbit. The dose was sufficient to kill rapidly in from one to three days. Soon afterward from two to five cubic centimetres of the enzym solution were injected into the same animal. This treatment was repeated five or six times. More animals were similarly used, and all were cured of anthrax, and became healthy again. One or two were then painlessly killed and dissected.

"It was discovered upon microscopical examination that the anthrax bacilli had multiplied so rapidly in the beginning that they had reached as far as the liver and spleen. But the enzym injected into the blood had reached even these. It had destroyed and almost dissolved them. The enzym had thus acted in the animal body just as it had in the glass flask of the laboratory. Experiments with other disease germs showed results equally gratifying."

YELLOW FEVER.

THE biological experts of the Marine Hospital service, Drs. Wasden and Geddings, report, after an investigation which has lasted nearly two years, that Saranelli's claim to having discovered the true source of yellow fever is entirely substantiated. Cases of genuine fever, studied in Havana, developed the micro-organism without fail. The germs gave the disease to animals, furnishing the final proof of the discovery. In Havana fourteen cases were diagnosed by Drs. Wasden and Geddings as yellow fever, and in each case the bacillus icteroides of Saranelli were found. Thirty-one bodies who had died of other diseases failed to reveal the germ, thus showing the Saranelli germ was present in yellow fever cases, but not in others. The conclusions reached by Drs. Wasden and Geddings are that infection takes place by way of the respiratory tract, the primary colonization in this tract giving rise to the earlier manifestations of the disease; that in the majority of cases the primary infection or colonization in the lungs is followed by a secondary colonization of the organism in the blood of the patient. In the opinion of the experts there exists no casual relationship between the bacillus X of Sternberg and this highly infectious disease, as that bacillus is frequently found in the intestinal contents of animals and of man, as well as in the bronchial secretions, while the bacillus icteroides produces *in vitio* as well as *in vita* a toxin of the most marked potency, and that from their present knowledge there exists a reasonable possibility of the ultimate production of an anti-serum more potent than that of Saranelli. Surgeon-General Wyman has taken up the work where Saranelli left off, and is now engaged in the bacteriological laboratory of the service in the development of a serum of greater potency than that of Saranelli.

ALCOHOL AND INSANITY.

COULD the drunkard see for a moment that in his slavery to a debasing vice he may be planting the seed of misery, of degradation, of crime, and possibly of idiocy in his future offspring, he might realize in such force the words of the inspired teacher, "to eat, drink and be merry," to indulge in full the animal passions of his nature; "but remember for all this God shall bring you to judgment," as to cause him to start back in terror as from the brink of hell. Statistics tell with fearful force upon the story of idiocy, crime and insanity blossoming and ripening in fruit bitter as the apples of Sodom, from seed planted in a previous generation. Statistics by one of our most painstaking physicians show that out of 300 idiots whose history could be traced, 155 were the children of drunken parents. In a large asylum, as stated by the superintendent, out of 958 admissions one-fourth could be clearly traced to intemperance in drink. This report is confirmed by the lunacy commission, who, in taking an average of the last five years proved that drink as a cause averages from one-fourth to one-fifth of all the admisssons to insane hospitals. The offspring of drunken parents, says Forbes Winslon, by a law of vital physiology, if they do not actually follow in the wake of their parents, still are in great danger of exhibiting some trace of moral or mental obliquity or of a nervous disorder clearly traceable to a deterioration of physical structure, probably seated in the brain, caused by a long and persistent indulgence in the use of intoxicating liquors.

CLIMATE IN THE PHILIPPINES.

MR. JOHN BARRETT, formerly Minister to Siam, and thoroughly familiar with the Philippines, in the August issue of the *North American Review* gives a very intelligent, and it may be supposed a perfectly reliable account of the climate of those islands, differing in some respects from the hap-hazard observations of casual visitors. Mr. Barrett has visited both the interior of Luzon and of Nippon, the principal island of Japan, and does not hesitate to say that aside from area and population the comparison is altogether in favor of the former. There is no richer undeveloped portion of Asia than the Philippine

group. As for climate, Manila is better off than Hong Kong, Bangkok, Singapore or Batavia, in all of which European business men and their families live in fair health and comfort. After living four years in the tropical city of Bangkok, which is hotter than Manila, and working harder than ever he did in America, Mr. Barrett says he came away in much better health than when he went there. If Americans will leave Manila for the mountains or seashore in the hot months, as they do in New York or Chicago, and take proper care of themselves, they will keep as well there as in America.

Those who are disposed to make a bugaboo of the Philippine climate may be surprised to hear that more people die of *La Grippe* in New York in one year, than of fever, cholera or plague in Manila in ten years. The tropics are all right, says Mr. Barrett, if the men who go there are all right, and if they take care of themselves when they get there. Above all things guard against excessive eating and drinking, and keep out of the sun in the middle of the day. Of course the tropics are full of unhealthy localities, but these are of a local character, and not due to a great extent to climate.

LIQUEFIED AIR.

THE process of liquefying atmospheric air has by a recent invention become so simplified that it can now be produced in great abundance and at a comparatively trifling cost. We understand a plant is now being erected in Los Angeles with a capacity of 1,500 gallons a day. The uses to which this agent can be applied as a force easily directed and controlled will be increased with study and experience. Already our physicians are testing its power, with the most satisfactory results, as a cooling agent in the sick room, as a clean caustic and as a destroyer of microbes. Dr. Murray, of the City Hospital, recently obtained excellent results from the application of liquid air to several cases of migratory erysipelas. It was lightly brushed over the surface and seemed to speedily control the inflammation. Equally good results were obtained in sloughing ulcers which had proved intractable to other treatment. Dr. Murray thinks the intense cold freezes the bacteria without producing appreciable harm to the living tissue, and suggests that in this powerful agent we may possibly find a controlling power in the treatment of leprosy, a disease which has thus far baffled the world. It is very evident that this new agent is yet to play a most important part, not only as a mechanical force, but in the treatment of diseases.

Dr. Le Plongon suggests that this agent will be likely to supplant the Paquline cautery, where the instrument at a white heat is quickly touched to the skin, now so extensively used in nervous diseases, and also it may take the place of the Chapman ice bag and the coils of tube filled with ice water, in peritonitis and other conditions where cold is found useful. Of course during the stages of investigation the utmost care and caution will be required, for it must be borne in mind that we are dealing with a powerful agent, capable in unskillful hands of producing great harm.

CROTALUS IN BUBONIC PLAGUE.

THE Indians inhabiting the country of the tributaries of the head waters of the Amazon, are subject to a disease, never epidemic but endemic, which resembles in a very marked degree some of the distinctive features of the bubonic plague. There is the same bubonic abscesses, sloughing ulcers, rapid wasting of flesh and speedy failure of the vital forces. The country is covered with dense forests, often impenetrable to the sun, the land low and swampy, and the air full of noxious vapors. The huts are filthy, the food mostly fish, and the habits of life but little above the animal. The disease, of a bubonic nature, but having no name, is often controlled by a scarification on the skin with the fang of the crotalus, through which is introduced into the circulation of the blood a minute portion of the poison. The poison of the crotalus overpowers that which is raging in the blood. Following this injection of the poison a decoction is given of the *cedron*, a nut resembling in its medicinal action *cinchona*, to neutralize the action of any excess of the crotalus and in the destruction of the poison germs of the disease.

The virus of the crotalus and the lachesis have long been used in medicine in suppurative diseases with low vital powers, but it is to be doubted whether in being given by the stomach they fully accomplish the result intended. To produce their full poisonous action they must be introduced directly into the circulation. If taken into the stomach, through the chemical changes produced by the action of the saliva and gastric juices they become inocuous as active poisons, although they undoubtedly produce a certain effect upon the vital forces, indicated by the type of the disease and the condition of the system. The poison should always be introduced in a form more or less attenuated, according to the severity of the disease, not by the stomach, but directly into the circulation, in the same manner in which toxins are given, by the hypodermic syringe.

The characteristic symptoms of the two diseases, both owing their origin in a very great extent to the same causes, filth and an impoverished condition of the blood from unhealthy food and surroundings, might point to the same remedies. It would not be the first time that science has received its most valuable suggestions from the wild men of the forests.

SEEKING THE SECRET OF MALARIA.

AN expedition has recently started from England for Sierra Leone, under the auspices of the Government, to study, under the most favorable conditions, malarial fever. This expedition, which has been formed of the best experts of the country, will make a particular study of that kind of mosquito which is supposed to be the medium of infection. They will set themselves to discover the conditions under which the bacilli of malaria flourish, the conditions fatal to them, and under what conditions the poison-bearing mosquito becomes infected. Experiments by inoculation will be made, and the expedition will aim to discover something which will render the human system proof against these attacks. The field is broad and the problem difficult of solution, in which many factors are involved. Among the most important will be the drainage of swamps and the classification of the poison-bearing vegetables whose malarial germs do not depend upon the decomposition of either animal or vegetable matter. Surgeon-General Sternberg a few years ago discovered the influence of a certain plant was productive of the most marked type of malaria. One of his experiments was to place this plant in the window of a sleeping apartment, an attack of some form of malarial poisoning being sure to follow to the inmates, persons sleeping in the other apartments not being in the least affected. If the human system could be brought into a condition to resist, by its own vitality, these poisons, the problem would be solved, but it is doubtful if this can be accomplished until the real nature is ascertained and the virulence to a certain extent controlled.

INTER-STATE RECIPROCITY.

THE idea suggested by THE TIMES, in a recent issue, of inter-State reciprocity, so far as medical examinations are concerned, is rapidly getting into effective working order. Among the first to take active steps in this matter is the Wayne County Medical Society of Michigan, who at its meeting on June 22 appointed a committee of sixty to investigate the best way of furthering the idea of a national health board and to consider the steps to be taken, which in time may lead to a uniformity of the requirements for the license of practising medicine throughout the United States. In the furtherance of this purpose the committee has sent a circular of inquiry to the authorities of every State and Territory as to the existing medical laws and the amendments, if any proposed, also whether they would consider favorably the plans of reciprocity and be willing to act with other States having the same object in view. All the authorities sending a favorable answer are requested to unite in framing a bill to be presented to the different legislatures for their action. This is a step in the right direction, and it is to be hoped by the prompt and enlightened action of the delegates some just and effective measure may be adopted. The profession and the public are under great obligations to the Wayne County Medical Society for its prompt and judicious action in the attempt to solve a vexatious problem and at the same time make the educational requirements more uniform throughout the United States.

LEGISLATION OR EVOLUTION?

THE editor of the *Medical Review of Reviews* remarks as follows in his July number concerning recent efforts to procure the enactment of laws for curbing the therapeutic activity of "Christian Science." "Considerable experience in endeavoring to correct abuses by legislation constrains us to question the wisdom or probable benefits likely to accrue from such a procedure. . . . The devotees of this persuasion . . . have chosen a name which appeals to the over-zealous believers in the literal interpretation of the scriptures, and such people as actually believe that the parables of the Bible are literally true are most ready to accept the theory that spirit can always control matter, if such faith as will "remove a mountain into the sea" is effectually exercised. . . . The State cannot properly prohibit any form of belief or practice until the rights of individuals are endangered thereby. . . . Anything in the slightest degree suggestive of persecution will only result in giving the most nonsensical delusion a longer lease of life.

Substituting the word miracles for "parables"—according to the writer's evident meaning—we heartily coincide with these conclusions. But their very justice prevents us from sharing his cheerful conviction that "like all other fantasies which originate in a brain diseased, this latest one will soon reach the ebb and disappear." For we cannot shut our eyes to one portentous fact which Dr. Lewis has strangely chosen to ignore—the fact, namely, that those "over-zealous believers" of whom he speaks constitute, not an insignificant fraction, but

the vast majority of church-going people in this country and throughout the world; therefore, if as he assures us, and as we have no doubt, the basic doctrine of Quinby-Eddyism finds its most ready acceptance among religionists of the type referred to, there can be no rational prospect of "bringing the people to their senses in these matters" until the teachings of a scientific biblical criticism shall have reached down to and fermented the entire floating mass of orthodox conservatism—a process which, in the nature of things, must be extremely slow. The mere statment of such a situation shows the absurdity of assuming that it is to be disposed of in short order merely by treating it "with silent contempt and disgust."

The fires of popular fanaticism can only be finally quenched by bringing about a change of composition in the spiritual atmosphere on which they feed.

WHORTLEBERRY IN ECZEMA.

DAXENBERGER, in a German journal, speaks very favorably of the use of the extract of whortleberry in various forms of eczema, especially of children, also in the myotic forms in smaller ulcerations of the skin and mucous membranes. A syrup of the extract is applied with a brush after the surface has been cleansed and dried; over this any simple dusting powder may be applied. Drying speedily takes place and no other dressing is required. The cure is often effected in two or three days.

THE report of the Commission of Survey for Great Britain shows that insanity is on the increase in England and Wales, the number of insane the past year being 3,114 in excess of the previous year. No special cause is assigned for this increase, which does not seem to be confined to any particular class. It is a gratification, however, to know that in every civilized country insanity has been so carefully studied that the percentage of cures is much greater than formerly.

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INTERNATIONAL CLINICS. A Quarterly of Clinical Lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology, and Dermatology, and Specially Prepared Articles on Treatment and Drugs. By Professors and Lecturers in the leading Medical Colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by Judson Daland, M. D. (Univ. of Penna.), Phila., Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania; Assistant Physician to the Hospital of the University of Pennsylvania; Professor of Clinical Medicine in the Philadelphia Polyclinic; Fellow of the College of Physicians of Philadelphia. Vol. I., Ninth series, 1899. pp. 303. J. B. Lippincott Company.

To keep fully abreast the times, one must possess such practically useful books as the volume before us. The articles are by authors of high standing, upon practical subjects, and are from original research—not text-books.

HAY FEVER AND ITS SUCCESSFUL TREATMENT. By W. C. Hollopeter, A. M., M. D., Clinical Professor of Pediatrics in the Medico-Chirurgical College of Philadelphia; Physician to the Methodist Episcopal Hospital; Pediatrist to the Medico-Chirurgical Hospital; to St. Joseph's Hospital; Fellow of the American Academy of Medicine, etc., etc. Second edition, revised and enlarged. Philadelphia: P. Blakiston's Son & Co., 1899. 12mo., pp. 151. Price, $1.

The author reports his remarkable and uniform success with a simple treatment of this intractable affection, together with a review of the literature of the subject. He has little to say as to its etiology, but admits that it is caused by an "external irritant, possibly containing a micro-organism or a toxin, which becomes especially active in the nasal passages of an individual predisposed by systemic debility or local abnormality."

The treatment is individualized to suit each case and is generally mild in character. Several important formulæ are given. The work should be possessed.

PROGRESSIVE MEDICINE. A Quarterly Digest of Advances, Discoveries and Improvements in the Medical and Surgical Sciences. Edited by Hobart Amory Hare, M. D. Volume II, June, 1899. Lea Brothers & Co.

The subjects discussed in this volume are surgery of the abdomen, including hernia, gynæcology, diseases of the blood, diathetic and metabolic disorders, diseases of the spleen, thyroid gland and lymphatic system and opthalmology. The operations in surgery of the abdomen, uterus, hernia and the eye are illustrated by half-tone engravings.

Dr. Clark, in speaking of transplantation of the ovaries, says: "The fact is so clearly established that even small bits of ovaries left after the most mutilating operations may continue to fecundate, that the question naturally arises why cannot the same course of events occur when the ovary is transplanted under the greatest and surgical precautions?"

We notice on appendicitis, which has recently created so much discussion, a very full and fair resumé of the whole subject. This article, in perfect fairness, and in fullness of information, is one of the best we have seen on the subject. In fact, the whole volume is edited with care, the freedom from prejudice being deserving of the utmost praise.

ELECTRO-HÆMOSTOSIS IN OPERATIVE SURGERY. By Alexander J. C. Skene, M. D., LL. D. D. Appleton & Co.

In the third edition of Dr. Skene's work on "Diseases of Women" the subjects discussed in this volume were briefly treated. In this volume the additional experience of the author in this line of work, the recent improvements in instruments and in the technique of operations are clearly and fully set forth. The volume forms a very excellent and most important supplement to the author's work on "Diseases of Women." The illustrations add much to the value of the work.

PRACTICAL DIAGNOSIS. The Use of Symptoms in the Diagnosis of Disease. By Hobart Amory Hare, M. D., B. Sc. Fourth edition, enlarged and thoroughly revised. In one octavo volume of 623 pages, with 205 engravings and fourteen full page colored plates. Lea Brothers, 1899; $5.50.

The great popularity of this work arises from the broad ground which it covers, and the ability of the author in selecting the pith of the subject and presenting it in prac-

tical shape. The work is divided into two parts, "The Manifestation of the Disease in Organs," and the "Manifestation of the Disease by Symptoms." This book is a companion of the author's work on "Practical Therapeutics," and together they form an up-to-date work on Practical Medicine.

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JACKSON: DISEASES OF THE EYE. A Manual of Diseases of the Eye. By Edward Jackson, A.M., M.D., late Professor of Diseases of the Eye in the Philadelphia Polyclinic and College for Graduates in Medicine. 12mo volume of over 500 pages, with about 175 beautiful illustrations from drawings by the author.

The above six works are in press for early publication in the fall of 1899, by W. B. Saunders, Philadelphia, Pa.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.

BIOLOGICAL SOCIETY.

The Chemical Composition of the Embryo and the Fœtus at Different Periods of Pregnancy—M. Charles Michel—The younger the fœtus the larger its supply of water; about 94 per cent. of water near the middle of the third month, and 69 in the newly born, confirming the opinion of Fehling. The quantity of fixed azote during the two or three last months is relatively enormous, about three and a half times the quantity fixed during the seven first months. The quantity of azote in 100 grammes of the dry fœtus varies but little; it decreases from 12 to 9 per cent. from the beginning to the end of pregnancy. If all the azote is fixed in the form of albumin, which is evidently not the case, the body of the infant will contain about 460 grammes, or one-eighth of its weight of albumin. The fixation of mineral elements is equally much more active at the end than at the beginning of gestation, as shown by M. Hugounency. The quantities of CaO and of P_2O_5 assimilated by the fœtal organism during the last two months, are about four times greater than the whole quantities fixed during the seven first months. The proportion of chlorurets and alkaline phosphates—soluble salts—decreases from the beginning to the end of pregnancy. Thus at three months the soluble and insoluble salts are to each other as 5.7 to 9.3. This fact is evidently a consequence of the progressive diminution of the water of the fœtal organism as age advances. It will be seen, too, that the proportion of chlorurets in 100 parts of dry matter is much greater in the fœtus than in the newly-born. On the other hand, the relation of phosphoric acid to lime seems much less as the fœtus advances, which is probably due to the rate of soluble alkaline phosphates, as there is a diminution of the quantities of water.

ACADEMY OF MEDECINE.

Surgical Treatment of Hydatid Cysts of the Liver—M. Dieulafoy—Laparotomy, with incision and removal of the cyst, should be reserved for old cysts, very large, and susceptible of adhesions, especially if painful and febrile symptoms cause fear of the infection of the cyst. Aseptic aspiration with a No. 2 needle is applicable in about one-half the cases. It is indicated when the hydatid cyst is not too thin nor too large, and when the symptoms do not threaten infection. Cure of the cyst can be obtained in a few moments by means of an insignificant puncture. In the treatment by aspirating puncture the cystic liquid should be evacuated totally; avoid exploratory punctures, which are the cause of accidents

Aortitis of Paludal Origin—M. Lancereaux presented two patients affected with the above disease. The first contracted the fever in Tonquin, the second in Cochin China. The first had attacks of angina pectoris, which diminished under the influence of the iodide of potassium and a milk regimen. There remained an aortic ectopia, with double aortic souffle, a hypertrophied and exhausted heart, requiring employment of digitalis from time to time. The second has had no crises of angina, doubtless because of the seat of the lesion in the anterior and not the posterior region of the aorta. On the contrary there was an enormous aneurism, which perforated the sternum, and for which M. Lancereaux employed twenty-four injections of gelatinized serum 2 to 100. The clot thus obtained became unglued at the lower part from violent coughing. Twelve injections were used again, and now the tumor is the size of the fist, and contains a very hard clot with a tendency to contract; patient seems as well as possible.

Methods of Gastric Exploration by Rays—M. Fovean de Courmelles—After passing in review the methods of seeing the stomach by transparency and the introduction of incandescent lamps or a fluorescent screen by the absorption of seltzer water, by employment of a sound heavy at its extremity and pierced with small perforations to introduce air (Rosenfeld), and none of these methods seeming to be of any permanent value, F. de C. has utilized the method of Balthazard and Roux, already sucessfully employed upon small animals, the ingestion of the sub-nitrate with the food. In a man of fifty years the first experiment, so tried in last December, with 10 grammes of bismuth, gave no result. Renewed eight days after, the patient's appetite was improved, he consumed more food, and there seemed to be a necessity for a large alimentary bolus for the purpose of distributing the bismuth more effectually throughout the stomach; a very clear proof was obtained. The first observation was of a contracted stomach, with white sclerosed spots, and a liver distant from the stomach and contracted. The history of the case indicated the ingestion—voluntary or not—of topical and corrosive substances, and a deficiency of alimentation for long years, a little tea and a little buttered bread sufficing for a stomach so curiously contracted; the bismuth and alimentary bolus rendered the proof clear.

OBSTETRICAL SOCIETY OF PARIS.

Interstitial Extra-uterine Pregnancy—M. Delaunay reported the case of a woman who, after a certain number of deliveries and abortions, was taken with abdominal pains and profuse metrorrhagia. Examination revealed a large, movable uterus, flanked by a hard, round tumor, large as an egg. Thinking that the tumor was annexial, vaginal hysterectomy was performed, and the tumor was found to be formed by a fœtal sac which contained a segment of the tube adjacent to the uterus. Cure ensued, but the question was asked by M. Delaunay, if, the diagnosis being assured, it would not have been better to practice laparatomy, which would have permitted a more conservative operation?

The Kidneys in Puerperal Eclampsia—M. Bar presented kidneys taken from a woman dead of eclampsia. The right kidney was enormous and weighed 195 grains. The other, very much atrophied, weighed 38 grains. It has been said that women who have undergone nephrectomy of one side are predisposed to eclampsia. In this woman, I believe that the auto-infection of pregnancy was more easily induced because one of her kidneys was non-functional.

The Circulation in Twin Pregnancy—M. Lamouroux—Three placentas from the service of M. Porak present many interesting points. They prove that the circulation of twins in an univittelline pregnancy may cause accidents to the fœtus, but that vascular anastomoses are not incompatible with two well-formed fœtuses. M. Bar: The question of the condition of children in gemellar pregnancy interests me greatly, having injected more than sixty placentas. In univittelline pregnancy it is not rare to observe a great difference of weight between the twins, and the inequality of development may be primitive or acquired. On examining the eggs of fowls with a single yolk I have remarked that from the beginning of development two unequal embryos may be seen. This difference may be secondary, and due to some obstruction of the placental circulation. When deep anastomes exist between the two circulations, one of the fœtuses, nourishing its brother, is less developed. If the anastomes be superficial they form canals of security, and the fœtuses are equally developed.

Omphalotripsy—M. Porak—Ligation of the cord may be accompanied by accidents, the principal of which are hemorrhage and infection. Following M. Bar, I have ventured to replace the ligature by permanent forceps, which has given excellent results. But it is very difficult to do the dressings, because of the forceps, so have tried crushing the cord, and for this purpose use a forceps that completely flattens out the cord. The vessels are clogged, and the crushing being made on a level with the skin, desiccation soon occurs. It may be said that the intestine may be pinched, but such an error would be unpardonable when one has to do with a true umbilical hernia. If there be a diverticulum of Meckel, fistula is always produced, even when tied at a distance, but I believe that this process is exempt from inconveniences. M. Bar: I am entirely of the opinion of M. Porak, as umbilical infections are much more frequent than is supposed. We see children in the days following birth become cyanosed, have difficult respiration, convulsions and die. One does not know to what cause to attribute death, but if a bacteriological examination be made, streptococci are found in the viscera, and this infection is very probably of umbilical origin. Since making forcible pressure of the cord my infantile mortality has fallen from 10 to 3 per cent.

PEDIATRIC SOCIETY.

Acute Leucemia—MM. Guinon and Jolly—The name of acute leucemia must hereafter be reserved for a special morbid condition, well defined by the works of Frankel, Gilbert and Weil, and entirely distinct from other varieties of leucemia. It is characterized at its beginning by a form of pyrexia with fever, chills and apathy. A special anæmia is rapidly produced, with cutaneous and gingival hemorrhages, the patient falls into a typhoid condition, and rapidly dies in a few months or weeks; sometimes indeed the evolution of the disease occurs in a few days. The glands and spleen are always much less hypertrophied than in other leucemiæ. The alterations of the blood consist of an enormous proliferation of small mononeuclei or lymphocytes, to the exclusion of other varieties of white globules (lympho-cythemiæ). We have just observed a case of this disease in a child of sixteen years that had been diagnosed as febrile chlorosis. Examination of the blood gave following results: Red globules, 685,000; white, 28,000. Percentage of varieties of leucocytes, lymphocytes, 93; intermediate, 3; large mononeuclei, 0.6; polyneuclei, 2.3; the lymphocythemia is most accentuated; patient died five days after admission. The liver, spleen and kidneys large and infiltrated with lymphomata; lymphatic glands a little more developed than usual.

Diphtheritic Impregnation—M. Barbier—The proofs established by M. Tollemer, which have shown that the diphtheritic bacillus may remain for a long time in the deep organs, support what I have called diphtheritic impregnation. Children who have not shown the presence of Loffler's bacillus in the throat for a considerable time may continue under toxic manifestations—apathy, depression, feeble pulse, etc. These phenomena may appear at the same time that a new deposit of false diphtheritic membranes may occur in the throat or upon the lips, and they may also be manifested in an isolated form. That which shows clearly their nature is that an injection of anti-diphtheritic serum is sufficient to cause them to disappear. Then it is very important to know the possibility of this diphtheritic impregnation.

SOCIETY OF HYPNOLOGY AND PSYCHOLOGY.

Vertigo of Locomotion—M. Paul Farez in the month of November reported the case of a woman who could not ride in an omnibus nor on a railroad without experiencing symptoms of seasickness. She was treated by suggestion, and made able to resist her usual trouble. Recently she has been able to travel for a day and night on a railroad without suffering the least inconvenience. This fact again attests the permanence of cures due to psychic treatment.

The Development of Morphinomania—M. Paul Farez—The Society of Legal Medicine has recently occupied itself with measures to assure the cure of morphinomania. There is nothing to prevent the development of morphinomania; the majority of pharmacists deliver morphine without any legal right, and considerable quantities can be obtained at the druggists. Moreover, the employees of hospitals become morphinomaniacs through the culpable complicity of nurses, and continue to be so after leaving. In certain quarters of Paris there are persons who make a specialty of giving punctures to the people on the seats of the boulevard, the squares, public promenades or urinals. This small industry is very lucrative, and the applicant is made to pay fifty centimes for a puncture, and thus made happy. It would be well to call the attention of the authorities to this fact. The Society has unanimously adopted this advice.

On Some Effects of Hypnotism—M. Berillon—It elevates arterial tension, and is one of the best agents for patients in a condition of hypo-tension. Among the melancholic and those that are depressed and despondent it is not necessary to suggest gay emotions, but more effective to produce at first a sort of motor reflex, and create a co-operative association between the muscles concerned in automatic laughter. This is easily obtained by static electricity in the axillary region. Psychological phenomena then adapt themselves to the physiological, and a lively emotion naturally succeeds laughter. By suggestion it is not sufficient to reach the preponderating symptom, but to look after general therapeutic treatment, and to suggest (1) nocturnal sleep. (2) To create gay ideas, and to revive taste for song. (3) To arouse the instinct of self preservation. The hypnotic should be spoken to long and often, with conviction, and like an advocate who pleads a cause fervently. Certain subjects should be made to hear certain musical airs during hypnotic sleep, that immediately awaken intensely gay emotions, accompanied with corresponding gestures.

J. A. C.

HOSPITAL REPORTS.

HOSPITAL NOTES.

1. The Treatment of Incipient Phthisis. 2. Hypertrophic Cirrhosis Benefited by Protrodide of Mercury. 3. Checking Diarrhœa in Beginning of Typhoid Fever. 4. Exophthalmic Goitre in a Male. 5. Mitral Disease. 6. Friction in Cold Sponging. 7. Severe Lesions in Typhoid Fever. 8. Pneumonia Complicating Typhoid Fever. 9. Uræmia with Localized Cerebral Congestion. 10. Stab Wound of the Chest. 11. Minor Cases.

THE TREATMENT OF INCIPIENT PHTHISIS.

The patient of whom I speak is a woman who comes to us with the history of a cough and occasional night sweats. There is not much sputum. Examination shows a chest that is not well developed and a prolonged expiration over the apex of the right lung.

I wish to speak of two points in connection with this case—first, diagnosis and prognosis; second, treatment. There is a morbid condition here, though there are no marked physical signs. The presence of prolonged expiration should be looked for and noticed early. Phthisis is

curable in a larger number of cases than is generally thought if it only be recognized and treated early.

The prognosis depends upon the response to medication and to climatic possibilities. If this patient could go to Colorado at once there is great probability that the disease would be arrested and that she would be able to live the remainder of her life there without being troubled by it. In her condition, however, where perhaps the food is not of the best and the surroundings are bad the prognosis is decidedly unfavorable.

The first thing to do in this case is to examine the blood and see how anæmic the patient is. So much depends on the general condition of the patient in such cases that this is of the utmost importance. It is the same here as with many of our most successful oculists at the present day—they recognize that many of the affections of the eye are treated better by tonics, etc., directed to the general health of the patient than by paying attention to the local trouble alone.

It would be foolish for two reasons to give creosote to this patient. First, there is little or no catarrh present. Expectoration is scanty. Creosote is of very little good in such cases of beginning tuberculosis, except as influencing catarrh if it be present. Second, its use would satisfy ourselves and the patient that something was being done for her relief when really no good was being accomplished.

The patient is anæmic, as is easily known by her looks. What she needs is out-door life, exercise in fresh air, and medicine to overcome the anæmia. Then she should have the most nourishing kinds of food, and abundance of it. Super-alimentation is of the greatest importance in such cases.

As a tonic pill in such cases the following will be found useful:

℞ Acid. arsenosi..... gr. ½
Ext. nucis. vom..... gr. iv.
Ferri. redacti..... gr. ii.
Quinin. hyhrochlor..... gr. xx.
Ft. Pil. No. xx.

HYPERTROPHIC CIRRHOSIS OF LIVER.

The next case is that of a woman of whom we spoke some days ago. She had an enormously enlarged liver, extending to the level of the anterior superior spinous processes. Jaundice was also present. Her condition has greatly improved under the treatment instituted, the liver having shrunken four to five inches from its first dimensions. The patient was given ascending doses of protiodide of mercury, beginning with one-tenth of a grain three times a day, and increasing until one and a fourth grains were given at a dose. Physiological effects were obtained, and for several days the patient has not been getting any of the drug.

The protiodide here probably benefited in two ways. First, there was a specific history in the case. Second, there was probably a catarrh of the bile ducts, and the iodine, together with the mercury, opened these tubes up.

DIARRHŒA OF TYPHOID FEVER.

The patient now before us is a boy, who is just recovering from a relapse of typhoid fever. I merely wish to speak of a point or two in the treatment of this disease.

As to the diet, I do not give beef juice, extracts, broths, etc., as these are just the materials bacteriologists tell us are good culture media for germs. Consequently I do not believe in giving patients with this disease just the food that the specific germs may thrive upon.

As to the diarrhœa of beginning typhoid, or in its first stages, I use the following:

℞ Acid, sulp. aromat..... ℥ ii
Ext. hematoxyl. fl..... f ℥ ss
Spt. camphor..... f ℥ ss
Syr. zingib..... q. s. ad f ℥ iii

Two teaspoonfuls of this mixture are given when the stools exceed four in number in a day.

EXOPHTHALMIC GOITRE IN A MALE.

Our next case is that of a young man who has exophthalmic goitre. This disease is rare in the male according to some writers, while others claim to have seen a considerable number of cases. There have been several in this clinic in the last few years.

The treatment of this affection is a difficult one, as there is no way to directly cause a lessening of the hypertrophy of the thyroid gland and thus diminish the toxemia caused by its over-secretion. One of the best drugs for the relief of this condition is, in our experience, veratrum viride. This is a good cardiac sedative, and as there is present excessive action of the heart the drug is of use. This man will be given two drops every eight hours, and this will be increased if indicated. In other cases the tincture of gelsemium does a certain amount of good, and belladonna has been employed with asserted good results.

A point to be remembered in connection with this disease is that in some cases there is terrific mental depression, especially in women. One woman under my observation, while not attempting homicide, developed such a tendency. While alone with her children the thought would arise, "What if I should kill one of these," or "What an awful thing such an act would be!" She would become frightened at herself because of such thoughts during her great depression. I have never heard of a case of actual homicide during an attack of the disease, but severe depression does occur.

Nothing is known of the etiology of the disease except that in some cases it seems to be hereditary. Some few years ago there was a girl in this clinic suffering from the disease, with the history that it had occurred in the mother, grandmother, two of her mother's sisters, and two of her grandmother's sisters.

TREATMENT IN MITRAL DISEASE.

The case of which I speak is that of a young man who came to the hospital with marked cardiac disease. There was a loud double mitral murmur, with great dilatation and hypertrophy. Breathing was so difficult that he had to sleep sitting up; his lips were blue, and there was also albuminuria. On the whole the man was in a very serious condition.

Absolute rest in bed was the first thing ordered; then he was given one-sixth grain of morphia, as he was greatly worn out from loss of sleep. This was indicated because there was no œdema of the lungs and the dyspnœa was partly nervous. The next morning he was better because of the sleep afforded. Then, as high arterial tension was present, one-hundredth of a grain of nitro-glycerine was given three times a day. This was given in the form of a hard pill and gelatine-coated that it might be slowly absorbed. This further improved his condition, but as there was evidence that the action of the heart was still in excess of his present need, one minim of the tincture of aconite was given every eight hours and the nitro-glycerine increased to four doses per day. Later relief and benefit was derived from an ice bag placed over the præcordium. There is no albuminuria now and the man is decidedly improved. Two things are to be noticed here: First, the benefit of rest in treating heart disease. Second, the result from the use of nitro-glycerine. If digitalis had been given arterial tension would have been raised and the heart stimulated temporarily, but in the end it would have been exhausted and the man would have been in a worse condition than at first.

Two other points are to be remembered in these cases: First, an alcohol sponge should be given every night, and second, with the sponge friction and gentle massage. Massage is always useful in any case where the patient is confined to bed in this way, but in these cases is especially beneficial because the hand, in promoting the flow of blood and juices through the tissues, takes the place of the heart to a considerable extent, and thus does a share of its work. Where there was low arterial tension present a cold sponge would be useful.

LARGE DOSE OF DIGITALIS.

There is in the ward a woman suffering from typhoid fever who has been severely ill during the whole of her stay here. She went about from one drug store to another for two or three weeks getting medicines for her relief, until she was obliged to give up, with the fever well advanced. She was so far along in the disease and so exhausted that, while cold sponging had some effect on the temperature, reaction was not good and cyanosis would develop. Later the first sound of the heart was entirely lost and her pulse rose to 150. Realizing that her condition was most serious three things were done. First, wine of coca was given in large doses. This preparation agrees with the stomach, and was thought valuable to gather together what strength the patient had left for a supreme effort. A tablespoonful was given every four hours. Second, one grain of camphor in olive oil was given hypodermically every eight hours for three doses. Third, digi-

talis was ordered, and to be sure of its strength normal liquid was employed. Something had been said about 10 minims of the tincture, and the nurse, thinking this was the dose to be used, gave that amount of the normal liquid. No untoward effect was noticed from this enormous dose, and the woman is decidedly better this morning. Whether the digitalis did not exert its influence because of the temperature or other condition present, or whether this was the dose needed for the occasion we cannot say.

ACTIVE FRICTION DURING COLD SPONGING.

Active friction during a cold sponge is an absolute necessity, in order that the desired effect for which the treatment is given may be obtained. Many practitioners report that they do not get good results from cold sponging, and probably this is why unsatisfactory effects are obtained in many of the cases. Active friction increases the heat given off by 80 per cent. by bringing the hot blood to the surface, where it is cooled by the water which is applied. Nurses under my instruction take a rough towel dipped in ice-water, or even a piece of ice, and rub the patient with this, while at the same time they rub the surface of the body vigorously with the other hand to bring the blood to the surface. If redness, almost like a rash of some of the eruptive diseases, does not appear something is wrong, either with the patient or the manner of giving the sponge.

One of my patients, a boy of ten years, was nursed by a friend of the family, and under her administration cold sponging did not do the boy any good. After seeing the half-hearted way in which she gave the sponge I persuaded the family to get a nurse who had been trained in giving the sponge correctly. The change produced in the patient's condition in one day was remarkable, showing the different results in the way of using the sponge. Owing to women having more sub-cutaneous fat, colder water than more active friction is needed to reduce temperature than in the case of men.

THE RELATION OF SEVERE LESIONS IN TYPHOID FEVER TO NERVOUS SYMPTOMS.

The specimens which I show are taken from a young colored woman who was in the hospital one week. She was thought to have typhoid fever, and this proved to be the case. The principal features about the case were the extraordinary nervous disturbance of the patient, she having high delirium and extreme restlessness, the latter being so marked that we were obliged to strap her in bed. Toward the end the delirium increased, and in spite of stimulants she sank and died.

We have here a remarkable specimen of lesions in the intestine. Not only are Peyer's patches involved, many of the ulcers penetrating to the peritoneum, but the ulceration has extended into the colon for a distance of 12 inches. The solitary glands may be affected as well as Peyer's patches in some cases, but for the ulceration to extend into the large intestine is very unusual. The patient had some diarrhœa, but no blood was passed.

This leads me to speak of the connection between nervous phenomena in typhoid fever and the degree of ulceration in the intestine. Some years ago I expressed the belief that where there was great nervousness extensive ulceration of the bowel was present. This is a case in proof of such statement.

We may say then that marked tremor, nervousness and extreme restlessness, irrespective of delirium, point to deep ulceration. The character of the stools will not always tell exactly, as there may be nothing special in their appearance.

A second point in regard to this case is that, although on account of the great nervousness the patient was strapped to the bed, and but little good was derived from the use of camphor and morphia, some benefit was derived from a drug not generally used in such cases. I refer to the hydrobromate of hyoscine, which was given in the dose of 1-200 of a grain three or four times a day. This was the one remedy that kept the patient somewhat quiet.

PNEUMONIA AS A COMPLICATION IN TYPHOID FEVER.

Our next patient is a colored girl of seventeen, who was admitted after being ill for fourteen days. Irrespective of the clear clinical evidence of typhoid fever the Widal test was positive, so there was no doubt of the existence of that disease. Equally clear was the existence of a true pneumonia in the base of the right lung. This morning the patient is convalescent from both attacks. Let us look at the case as admitted and see what share the pneumonia took in the case.

As she was not admitted earlier we cannot tell just when the lung complication began, but from the history of the case it is probable that this was about the middle of the typhoid fever course. There are various lung conditions which are apt to occur in typhoid fever, but the appearance of genuine pneumonia is rare, and when it occurs in the middle of the course of the fever it adds a great element of danger to the case. The typhoid poison seems to fasten on the lung instead of on the intestines, exhibiting here its greatest virulence. If the case terminates fatally the bacilli are found even deep in the very structure of the lung; hence this condition should be looked upon rather as an essential part of the case under certain conditions rather than as a complication, for the bacilli have attacked the lung rather than the intestines.

Occasionally the process is this: Pneumonia begins the case and the enteric phenomena are light. The Germans call this "pneumo-typhus," and it is always of the greatest gravity. When this condition comes early the diagnosis is grave. Occurring later in the course of the disease it is still grave, but not necessarily fatal, as is seen in this case.

The treatment here has been the giving of the carbonate of ammonia, 5 grains every third hour, together with 1-30 of a grain of strychnia. As a stimulant ½ ounce of whiskey was given every two hours. Dry cups were applied at the back of the right lung, apparently with much benefit.

Nothing was done for intestinal lesions, as our whole attention was given to the condition of the lung, except that the typical typhoid fever diet was given all the time.

URÆMIA, WITH LOCALIZED CEREBRAL CONGESTION, TREATED BY BLOOD-LETTING, CHLOROFORM AND CHLORAL.

The following case was that of a man, aged forty-five, who was admitted in an unconscious condition. The history obtained by the ambulance surgeon from the people in the house where the man had been staying was that he had been drinking heavily for two weeks, and that early on the previous night he had become unconscious and began to have convulsions. These convulsions continued at short intervals during the night and next morning, up to the time the ambulance arrived. He had three attacks while on the way to the hospital.

An examination immediately after admission showed the heart's action rapid and very tumultuous, with marked accentration of second sound. There were no murmurs. The lungs were normal throughout, except at the right base posteriorly, where there was slight hypostasis. Auscultation showed that peculiar breathing which is so often found in uræmic conditions, viz.: inspiration prolonged and very harsh, expiration about the same length as inspiration, having a harsh and, in addition, a peculiar dry sound. The liver semed to be somewhat reduced in size. The feet and ankles were quite œdematous. The pupils were pin-point in size. An examination of the head revealed an old scar, with marked depression, situated nearly over the center of the fissure of Rolando, on the right side. The urine was heavily loaded with albumin, and contained large granular casts.

The man was at once put in a Simpson bath, and began to sweat profusely. At 11:10 he had a severe convulsion, which involved the muscles of the whole body. Nitrate of amyl was given by inhalation. A second convulsion followed at 11:27, and a third at 11:42. Nitrite of amyl was also used in both of these convulsions, but with little effect. At 11:45 chloral, in 20-grain doses, was given. At 11:52 a convulsion began, but this was aborted by the use of chloroform. At 12 noon, 12:08 and 12:16 P. M. convulsions appeared, which were modified by the chloroform inhalations. At 12:25 the patient was bled, 12 ounces of blood being taken, which was followed at 12:30 by a very slight convulsion. Fifteen minutes later the patient was conscious, and gave the following history:

His family history was negative. He has suffered from the usual diseases of childhood. He had always been a very hard drinker. Three years before he had been struck on the head with a stone, from which he was unconscious for some time, and ever since a prolonged spree would be followed by these convulsions, but never of such severity as on this occasion. They had been growing worse with each succeeding attack.

He was given 20 grains of chloral at 2 P. M., and diluted spiritus ether nitrosi every two hours. He was quiet for the rest of the day, and slept well that night.

On the next day patient was quiet during the day, sleeping most of the time. At 10:05 P. M. a convulsion occurred, aborted by chloroform. At 10:12 P. M. another convulsion began, the character of which had changed, being now unilateral and confined entirely to left side. It started in his left arm, which was thrown about wildly; then the leg and face became affected, and the left leg was drawn up and down with considerable violence. The corner of the mouth was drawn down and to the left, and there was conjugate deviation of the eyes. At 10:35 P. M. a similar convulsion, controlled by chloroform. 11:30 P. M. chloral was given; 11:40 P. M. a slight convulsion, chloroform being used. The patient slept during the remainder of the night.

For the next three days the following occurred: On the first day patient was quiet during day, sleeping most of the time. On the next day the patient rested well until 2:10 this morning, when he had a slight convulsion. At 2:50 A. M. a convulsion began, which was aborted by chloroform. After 4 A. M. the patient slept, and was quiet during the day. On the third day the patient rested well last night, and has been quiet during the day. On the following day the patient slept during the entire night, and had been quiet in the morning. He insisted on going out, so he was discharged. His temperature ranged from 102.3 degrees to 97, being highest during the convulsions.

The convulsions here seemed to be complex in origin. The injury to the skull had undoubtedly affected the motor centers beneath, and any intense excitement, such as a prolonged debauch, was enough to convert this condition of the motor centers into a discharging lesion, while without such excitation the irritation was not sufficient to produce symptoms. When admitted to the hospital he was in a uræmic state, and the general convulsions due to the uræmia masked the localized ones. When, owing to the clearing up of the uræmic condition, the general convulsions disappeared, there was left a convulsive condition. limited to the left side, due to the discharging lesion in the right motor cnters. It is interesting to note, too, the effect of the blood-letting. The first bleeding speedily restored consciousness and abolished the general convulsions, probably through its action on the uræmia. Then the original. unilateral convulsions became apparent, gradually growing more severe, to be controlled in their turn by a second bleeding, by a relief to the congestion of the right motor centers. Without the bleeding the result would probably not have been satisfactory, for up to that time, under vigorous treatment, the condition had been growing steadily worse. Here, as I think is often the case, free blood-letting, combined with the administration of chloral, proved to be the most effacacious treatment for the convulsions of uræmia.

STAB WOUND OF THE CHEST, PENETRATING INTO THE PERICARDIUM.

The following case, a colored man, aged nineteen, was admitted into the hospital with the history of having been stabbed with a large double-edged knife during a quarrel. On admission his temperature was normal, his pulse 60; his respiration was normal. There was a stab wound of the chest three-quarters of an inch long between the eighth and ninth ribs, on the left side, one inch outside nipple line. A probe passed into this wound went upward, inward and backward through the lung and rested on the apex of the heart. The probe entered a little more than 6 inches. In placing the finger within the wound the apex of the heart could be distinctly outlined. Its action was very slow, strong and regular. On auscultation over the heart there was a peculiar crackling murmur to be heard. There had been very little bleeding, and no escape of pericardinal fluid was noticed.

The wound was sutured and dressed with iodoform and collodion, and the left half of the chest strapped. He was placed upon Dover's powder, 2 grains; calomel, 1-6 grain, every second hour.

By midnight his temperature had risen to 100 2-5 degrees, respiration 36, pulse 84, and he was complaining of some little pain over the region of the heart. He was given a dose of morphia hypodermically and slept the remainder of the night.

On the next day the temperature was 100, respiration 26, pulse 64. The man was resting quietly and was very anxious to go out. There was no pain in the chest.

Two days later the temperature was normal, respiration 20, pulse 56. There was no pain and no cough. On the 23d the wound was dressed and found healed. Temperature, pulse and respiration were normal. The patient was discharged at his own request.

TWO CASES OF ACUTE TRAUMATIC TETANUS.

The next case was that of a boy, aged thirteen, who was admitted to the hospital. While playing in a stoneyard he had received a crush of the soft parts of the right foot by a tombstone falling on it.

On admission the sole of the foot was split on both sides parallel to the metatarsal bones, and the cellular tissue was severely lacerated. The wound was thoroughly cleansed with bichloride solution, the edges brought together loosely by adhesive plaster and the foot put in an antiseptic dressing. The child was placed in bed on a light diet. For five days he did well, resting quietly, with slightly elevated temperature and accelerated pulse.

On the morning of the fifth day, when attempting to eat his breakfast he noticed that his jaw was stiff, and that swallowing was extremely difficult. He was seen shortly afterward, at which time his jaws were completely locked, with great prominence of both masseter muscles and slight retraction of the head. The temperature at this time was 100, pulse, 98, respiration, 20. An attempt to administer chloral and bromide brought on a mild convulsion, which lasted for several minutes. He was then given hypodermically ¼ grain of the extract of physostigma, to be repeated in half an hour.

One hour later the contraction of the muscles had subsided sufficiently to enable him to take fluid extract of physostigma 5 minims, with chloral, 10 grains, every two hours for the remainder of the day. The dressing on the foot being removed the sole was found sloughing and the little toe gangrenous. All the dead parts were removed and the wound was dressed with a charcoal poultice containing pulverized opium, 30 grains to the ounce.

During the day he rested fairly well. *Risus sardonicus* developed by noon, and by 5 in the afternoon he had the first severe tetanic convulsions with marked opisthonus. At 11 P. M. he had another convulsion, and from then on until death, which occurred just twenty-five hours after the first symptom developed, the convulsions were almost constant. The temperature had been rising gradually all day, until it reached 109 degrees in the axilla at death.

Post-mortem examination, which was made six hours after death, showed the meninges of the brain and spinal cord intensely congested; otherwise the organs were normal. Samples were preserved for microscopical and bacteriological examination.

The following man, aged twenty-three, was admitted to the hospital with a cystic sarcocele of the right testicle and a ganglion of the right wrist. Both tumors were removed, the former by means of the ecraseur, and the latter by dissection under strict antiseptic precautions. The patient did remarkably well until the tenth day after the operation, when in attempting to eat his breakfast he noticed that his jaw was stiff, and it was with great difficulty that he could masticate his food.

When seen a short time later his pulse was 68, temperature 98, respiration 22. The patient was apparently well, but with a slight degree of *risus sardonicus* present and some prominence of the masseter muscles, with total inability to separate the teeth. He was given extract of physostigma, ¼ grain, hypodermically, followed by chloral, 20 grains, and fluid extract of phvsostigma, 10 minims, every second hour.

Both wounds were opened and found in good condition, and were redressed with charcoal and opium poultices The patient slept the greater part of the day comfortably.

Next day the temperature was 102 2-5, pulse 116, respiration 18. He was thoroughly under the influence of chloral and slept quietly. The bowels were well opened with an enema, and the urine was passed without difficulty.

The *risus sardonicus* was very marked, and saliva dribbled from the mouth. During the afternoon he had two convulsions, which were accompanied by pleurothotonus.

Next day he was much worse. Convulsions were frequent and were produced by the slightest touch. In each the whole body was arched to the side, usually to the left. Patient sank rapidly during the night. An observation to see whether the temperature rose after death was made in this case, which demonstrated the fact that it rose 2 3-5 degrees, or from 105 at death to 107 3-5 forty minutes after death. No post-mortem examination was allowed.

MINOR CASES.

The next case was that of inguinal abscess resembling hernia.

This woman, aged forty, married, was admitted to the women's surgical ward of the hospital, with the following history: One week before she fell, striking her left hip. She noticed no inconvenience at the time, and continued about her work as usual. She says that three days later a tumor suddenly appeared below Poupart's ligament on the left side, which was tender and very painful, and increased rapidly in size. The seventh day after she had fallen she had a chill, followed by fever and sweat, with considerable vomiting and retching. The bowels were at first constipated; afterward they became very loose. Complete loss of appetite.

On admission there was a hard, firm tumor just below Poupart's ligament, on the left side. There was no fluctuation and no impulse on coughing. Percussion sound was flat. The vomiting and diarrhœa continued, the vomited matter being mucous—at no time fæcal. The abdomen was slightly distended, and tender about the lower left iliac region. The tongue was heavily coated, dryish and tremulous.

Temperature on admission, 102; pulse, 116; respirations, 26; thoracic in character. The patient was etherized. The surgeon cut down and found a large abscess, which was bound above by Poupart's ligament, and dissected up the muscles for a considerable area. The contents were evacuated, and the cavity thoroughly washed out with bichloride of mercury solution and dressed antiseptically. The abscess cavity rapidly filled in, and the patient was discharged cured.

The next case was a complete acute prolapse of the rectum.

This man, aged forty-one, a laborer, was admitted to the hospital with the following history:

He had always enjoyed good health, and was a well built, muscular man. Bowels were always regular. Had never had any sickness or venereal disease. While lifting a heavy box, he suddenly felt something give way about the rectum. He stopped work during the day, and applied for admission to the hospital.

On admission, temperature was normal, general condition was good, except that he was slightly under the influence of alcohol. On examination, the whole rectum was found to be invagnated and protruding about 5 inches. It was much discolored and appeared strangulated; was swollen, but smooth. The internal sphincter could just be reached with finger, and was very much dilated.

The mass was easily reduced by manipulation, and a suppository of tannic acid and opium was given. The next morning his condition was good, bowels were moved and the rectum in proper position. The man states that he never had anything of the kind before, and was at his usual occupation when the accident happened.

Bacteriology as a Fad.—The following remarkable statement appears in *The Home Magazine:* "Dr. Heneage Gibbes, after occupying the chair of bacteriology for ten years or more at Ann Arbor has accepted the position of health officer for the city of Detroit. Dr. Gibbes to-day denies bacteria as a causative factor in disease. It has to be borne in mind, too, that in publishing this statement he does not give it as his opinion merely, but as a fact based upon actual experiments; said experiments, consisting of inoculation with bacteria, having been performed upon himself time and again without the slightest effect. He not only says that the idea of dodging a bacillus here for one thing, and another somewhere else for another thing, is absurd and 'simply a fad,' but he absolutely denies the fact that—hitherto urged as a proof of their etiological nature—that these 'pathogenetic' micro-organisms are always present in disease. He says: I have conducted hundreds of autopsies on consumptives without finding a trace of the bacillus tuberculosis. I taught along the lines of Koch, but presented results for what they were worth only. There is no such thing as *German* science; science is universal. My personal investigations have convinced me that the whole germ theory of disease is a fad. In Germany, Dr. Koch's theories are regarded as *theories* only; but in this country they are held too frequently to be *facts.*'"

CORRESPONDENCE.

THE SCIENCE FALSELY CALLED CHRISTIAN.

From the *Literary Digest* we clip a quotation from the *Philadelphia Times* which is of decided interest to the medical profession:

"The public press reports almost daily the sacrifice of life to the charlatinism popularly known as the faith cure. It is organized in all the great centers of population, and tempts those who would profit by the infirmities of others to engage in it as a matter of speculation. The faith cure doctor is now to be met with in all the cities and larger towns of the country and often in rural communities, and alleged professional services are rendered for pay the same as regular physicians."

Commenting on the speculative feature of the "fad," the *Springfield Republican* of August 11 calls attention to the case of a young English school teacher, who, having attended some of the "free lectures" given in the usual charlatan style of drumming up recruits, decided to be treated after the faith curists' method. "After listening to the lecture of Miss Van der Braggen, the poor little school teacher applied to Mrs. Jansen, another American healer, for treatment, and received the following letter:

"If you desire correspondence treatment will you kindly send me the *usual preliminary fee* of one guinea? The charge in addition will be one guinea a week as long as the treatment continues. You must also purchase *without delay* 'Science and Health,' with 'Key to the Scripture' (!), the price of which is fourteen shillings net. For personal treatment our fee is eight shillings for the first visit and four shillings for each subsequent visit. We do not make any reduction from these terms, except to the *extremely* poor, and payment is invariably made *at the time of treatment* (!). *The running up of bills for healing is contrary to the spirit of Christian Science.*"

Well, if this does not give the ordinary overworked and underpaid general practitioner a hint as to medical bookkeeping, it will be a pity indeed.

VERB SAP.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine of New York, Etc.

Experience With Heroin.—I have used Heroin in a large number of cases in 1-12 gr. doses, with generally good results. My cases were both *acute and chronic bronchial* and pharyngeal *catarrhs.* The effect was *immediate and permanent,* in some cases of *grippe* even marvelous. A case of chronic bronchitis of long standing was rapidly cured, after resisting all other means. In this case a few doses of Heroin set up a profuse mucous colitis, which entirely relieved the bronchial irritation, and an occasional repetition of the remedy cured the case completely. I can also report favorable results in many cases of pharyngeal catarrh. In all my cases where I obtained good results there was a *tendency to a soporous condition,* and the failures were in cases where the opposite condition predominated.

Dr. W. F. Morgan writes me that he has tested Heroin in three cases, and it proves to be good wheat. Case I.: Tuberculosis pulmonalis, supposed to be of about one year's duration. Expectoration and cough so slight, so scanty, that forty-eight hours passed before sputum was obtained for a bacteriological test. A very rich field of tubercle bacilli was shown by the microscope. In this case there is great emaciation, but at present the patient is gaining slightly in weight. Is using unfermented grape-juice, and all the good milk and beef in alternation his stomach can bear. Had found decided benefit from the use of codeine and phenacetine, but was so much pleased with the superior effect of the Heroin that he ordered 500 1-12 gr. tablets, and has used them daily for about three weeks. I am told a sister of this patient died of lung tuberculosis, and during an illness lasting about one year, expectorated but once! Case II.: Female, æt. eighty. Troubled for many

years with asthma. *Status present.* Senile dementia and chronic bronchitis. Heroin affords very marked relief to the bronchial trouble. Case III.: Boy, æt. ten. *La Grippe,* followed by pneumonia and peritonitis. At present symptoms point to tuberculosis, but have not as yet found the bacilli. Prognosis grave. Have used Heroin and various other remedies with only temporary benefit.

Ipecac in Feeble Digestion.—Mathieu (*La Presse Med.,* April 5, 1899) thinks that ipecac is one of the best remedies to excite the stomach when the motor action is feeble. He prescribes it in minute doses. Following are two of his favorite prescriptions:

℞ Tinct. ipecac, " columbae, " gentianae, } aa ..... 3 iij

M. Sig. Take 5 to 10 drops in a little water after eating, and repeat the dose in a half-hour, and again in an hour.

℞ Tinct. ipecac ..... 3 j
Saccharin ..... gr. j
Menthol ..... gr. ijss
Alcohol 80 per cent. ..... 3 vjss
Syr Simplicis ..... oz. ijss

M. Sig. Two to 4 teaspoonfuls in divided doses after eating.

Vasogen in Practice.*—In Vasogen we have a preparation that does penetrate, that does not harden the skin, and is not *per se* an irritant, thus offering an ideal vehicle or base for the topical employment of drugs that have heretofore been employed with limited effect.

I will report first the case of a female, age nineteen, who sustained an injury to the right sciatic nerve by a fall upon the floor of a skating rink. A constant pain reminded her of the accident but did not render her an invalid for some eight or ten weeks, at the end of which time she suffered a very troublesome attack of nervous prostration and sciatica, which latter persisted for several weeks in spite of internal medication. Liniments, lotions, blisters, heat and cold, hypodermic administration of morphia, atropia, nitroglycerin and carbolic acid, nerve pressure and nerve stretching too were employed without avail; the pain persisted and the leg began to waste away, so that the condition was becoming an extremely grave one.

Just here the Iodine Vasogen was brought to my notice, and I at once began its use by injecting 15 minims deep into the hip just over the great sciatic at its exit from obturator foramen. After four such injections I began the local use by applying with considerable friction twice a day. The patient was better in a few days, and was well and going without crutches in about eight weeks.

Hot Water Treatment of Croupous Pneumonia.—Kolipinski (*Maryland Med. Jour.,* March 25, 1899) thinks that as soon as croupous pneumonia is diagnosed the treatment should be as follows: A pair of hot-water bags are selected, the largest size found in the shops, preferably of the capacity of a gallon. These are filled with boiling water, well secured from leakage, and each one wrapped in a small shawl of compact texture or in a portion of blanket cut for the purpose. They are then placed side by side on the bed so that the mouths of the bags point upwards; over them is placed a third shawl folded several times, or a further piece of blanket; above them two or possibly three pillows are arranged for the patient's head. The bags thus form a sort of shallow cradle for the postscapular regions. To make the plan clear to the attendant he is told that the bags must be placed like a knapsack on the back of a soldier and a little higher up as well. The bags are refilled every three or four hours. The exterior temperature, found by placing a common atmospheric thermometer between the coverings of the bags and the patient, varies from 95° to 130° F. A mean temperature of 130° F. should be aimed at, as an elevation of 120° F. or more is liable to inflict severe burns on the skin, particularly so if the patient's cutaneous sensibility is for the time obtunded. These burns, which Dr. Kolipinski says he has frequently met with, due to the overzeal or excitability of the attendants, have no untoward effect on the course of the lung fever, but very probably the opposite, and a pneumonia may disappear in a day or two when this accident has happened, although the injury itself may remain for two or three weeks.

The bag treatment is continued without intermission until the body temperature returns to normal and remains so for a day or two.

Physiotherapeutics and Balneology.—The exploitation and accurate knowledge of the mineral springs of a country is a source of health, wealth and education, thus directly interesting the Department of Agriculture, of the Treasury, and especially the urgently needed Department of Public Health (*J. A. M. A.*). The modern tendency of therapeutics is to work along the lines indicated by nature, and the importance and significance of balneology and climatology are only beginning to be realized. On the other hand we have outgrown many drugs which still cumber the pharmacopœia, and it is a waste of time for the student to study them when modern therapeutics is drifting ever farther away from them. A Russian professor makes an eloquent appeal in the last *Deutsche Med. Woch.* for the curtailing of the hours devoted to pharmacology and the introduction of a course of physiotherapeutics into the medical curriculum. The chair of hydrotherapeutics and balneology, established at Vienna for Professor Winternitz, is proving very successful and a special institute for physiotherapeutics is planned at the Berlin "Charité."

Cold Water to Allay Persistent Vomiting.—Mitchell (*Va. Med. Semi-Monthly,* April 14, 1899) reports the successes he has had with cold water in the treatment of persistent vomiting. It is applied to the epigastrium by means of towels wrung out of ice water, which are changed every minute until the vomiting ceases. In fifteen or twenty minutes the cold will be successful, and the treatment may then be discontinued, to be resumed later if necessary. By these simple measures Mitchell has succeeded in stopping dangerous vomiting in a number of instances, after child-birth for example, when medicines and other external applications had failed to give relief.

Treatment of Ozena with Citric Acid.—Hamm (*Muench. Med. Woch.,* April 11, 1899) recommends citric acid as a remedy which at once alleviates and deodorizes. All fruit juices have a deodorant effect. Billroth used to deodorize fetid cancer by the application of poultices made of fresh figs.

The patient should wash out the nasal fossæ every morning, and when the cavities are thoroughly freed from secretions and crusts should have the powdered acid applied with a powder-blower. This application should be repeated twice during the day. The acid may be diluted with sugar of milk if desired. Author guarantees improvement, absolute removal of fetor, and indirect benefit to the general health in consequence of this.

Veratrum Viride in Puerperal Eclampsia.—Coston (*Va. Med. Semi-Monthly,* III., No. 10, p. 565) from his own experience and that of others, offers the following conclusions:

1. Veratrum viride is a perfectly safe remedy; even when used in extra large doses no danger need be feared so long as the patient is kept in the recumbent posture.
2. It is almost a specific when used early for all cases of puerperal eclampsia.
3. Those who inveigh against it have used it either not at all or too sparingly.
4. Use the pulse as a guide, and give the medicine in ten or twenty drop doses, hypodermatically, every thirty minutes, until the pulse is reduced to sixty per minute, and continue the remedy in smaller doses at longer intervals until coma disappears entirely.

Calomel in Heart Disease.—Maldarescu writes to the *Therap. Woch.* (*Mass. Med. Jour.*), describing the successful results he has obtained with calomel in heart troubles accompanied by distress in breathing, severe disturbances in the circulation, ascites, œdema, albuminuria and hypertrophied heart and liver. He gives it in six powders with sugar, 0.10 gramme every two hours during the day for two or three days, following this with 0.10 to 0.20 gramme a day for a few days, after which he commences potassium iodide. Enormous ascites and œdema vanish with this treatment, and even patients in complete cyanosis are restored to comparative health. He ascribes this wonderful action of the calomel to its effect upon the liver. It relieves the congestion, and thus restores the circulation in the important portal and liver veins, which

*By J. A. Humphrey, M. D., President Henderson Co., Ky., Medical Association.

exerts a favorable influence on the entire circulation and cures some of the complications while it relieves all. The gums are frequently affected by the calomel, and he orders a mouth wash from the first, consisting of potassium chlorate, 10.0; tannin, 0.25; dist., 350. He limits his patients to a milk diet during the treatment, and warns them to refrain afterwards from alcohol and excessive exertion, and restrict themselves to a light diet and persist in the use of potassium iodide. He has treated 107 cases with five deaths of those that were in ultimis, and nine other deaths, all of elderly persons in advanced stages. He scouts the idea that calomel can form sublimate in the alimentary canal, as a very elevated temperature is required for this.

How Burns Kill and How to Treat Them.—It has long been known (*Med. Council*) that extensive burns are very fatal, but the exact reason has not been understood. Vomiting has been a bad symptom, so bad in fact that the elder Hebra, as well as Koposi, despite their enormous experience with this class of cases, declare that they have never seen a case of burns recover after vomiting had begun. As far back as 1891 there appeared in the *Medical Record* of August 8, a paper by Dr. Lustgarten, in which he shows conclusively that death is due to an animal poison generated by micro-organisms that develop in the eschar. This poison he believes to be either muscarin or something very like it. This is a most virulent poison in small quantities, even five milligrammes causing severe symptoms in a man. The effect of this poison is to greatly irritate the nervous system, and it is from nervous irritation and consequent exhaustion that these victims of extensive burns die. Atropine negatives the effect of the muscarin by paralyzing the susceptibility of the nervous system. He found the practical application of his theory to yield successful results. Cases have been saved after the onset of vomiting, and all by the prompt hypodermic injection of atropine. Improvement begins at once after the first injection, which should consist of about 1-75 to 1-50 of a grain. It may be repeated if necessary within a short time, say an hour, if no effects follow the first dose. Otherwise, it is not to be repeated until the effect of the first dose begins to cease.

RETROSPECTIVE DIETETICS.

Diet for Surgical Cases.—Dr. Wyeth said that, in addition to the treatment already detailed, there was a careful system of dieting employed, which he considered extremely important in all surgical cases. It was just as important in his opinion to eliminate septic poisonous gases and ptomaines from the bowel as it was to supply suitable nourishment to the system. At intervals of about one week the patient was given the small calomel-and-soda triturate tablets up to one or two grains. One or two teaspoonfuls of Carlsbad salt in hot water were given in the morning of the day of operation to secure a thorough emptying of the intestine. The nourishment should be administered in moderate quantity, four or five times a day, rather than a larger quantity three times daily. He did not advocate a limited and soft diet, or a too strict diet; surgical patients could often digest a small quantity of beef, chicken, or quail better than broths. In the way of meats, he would give sirloin or tenderloin steak, roast beef, mutton chop or stewed chicken. Goose, bacon or fat of any kind should be forbidden. Eggs should be given sparingly. The yolk contributed to the formation of gases in the alimentary canal, and consequently, if the yolk was given at all, the yolk of one egg should be added to the whites of two or three eggs, and the eggs shirred. Shredded wheat, the crust of a roll, and fresh butter in moderate quantity might also be allowed. All uncooked vegetables were strictly forbidden. Beans, peas and carrots cooked slowly, asparagus and sweet potatoes in moderate quantity were chiefly relied upon. The white or Irish potato was not so satisfactory. When given, it should be boiled, thoroughly mashed, mixed with cream, and then baked. Fruits were very rarely permissible.

Beer in Tablets.—"There is nothing very surprising," says the *Indian Medical Gazette* for June, "about the statement that in a short time beer will be on sale in the form of tablets. In Germany the beverage has been reduced to a powder by a process of evaporation, and a very small quantity of the powder is needed, with the addition of water and carbonic-acid gas, to make a foaming tankard of ale just as good as if it were freshly drawn from the barrel. As the *Manchester Evening News* suggests, it is just possible that this new departure may ultimately have very important effects on the brewing and bottling trades, inasmuch as it will no longer be necessary to transport barrels and bottles. Solid beer yields another example of the strangeness of truth as compared with fiction. An Arctic explorer used to be fond of telling how, up in the far north, the ship's beer froze and how it was necessary to break it up with crowbars, and then suck the pieces."

Strawberries and Gout.—The *Lancet* for June 24 cites a writer in *Nature* who speaks of the cruel medical tyranny which banishes the strawberry from the diet of the gouty and quotes what Linnæus had to say about the curative properties of this delightful fruit. This great naturalist was persuaded to take strawberries during a severe attack of sciatica, with the result that a sweet sleep ensued, and when he awoke the pain had sensibly subsided. On the next day he ate as many strawberries as possible, and on the following morning the pain was gone and he was able to leave his bed. Gouty pains returned at the same date in the next year, but they were dispersed as soon as Linnæus was able to get strawberries. Although strawberries are forbidden to the gouty by some authorities, by others they are permitted, the fruit being regarded as a useful food for gouty persons on account of its richness in the salts of potash, soda and lime, and its cooling diuretic and laxative qualities. The analysis of the strawberry shows it to be particularly rich in sodium salts, and in spite of the high percentage of water this fruit excels all other common fruit in the amount of mineral salts The chemistry of the strawberry, therefore, would teach that this fruit is likely to be beneficial in gouty states.

Milk Albumen a Cheap Food.—The abundance and cheapness of buttermilk would render it a valuable food product if it were not for its bulk and speedy decomposition. According to the *Muenchener Med. Wochenschrift* (June 27), Siebold has perfected a process by which it is mixed with sodium bicarbonate, worked at 70° C., with CO introduced and the product evaporated to an odorless, tasteless powder—"Plasmon"—which can be sold at a profit for about ninety cents a kilo, and can be added to any dish, bread, etc., without affecting its flavor while immensely increasing its nutritive value. Professor Prausnitz's tests at Gratz were made with the most scrupulous accuracy and double control, the feces analyzed in every case. They demonstrate that 8.07 per cent. was the largest amount of this albumen eliminated unutilized, the average, six and a fraction, proving that almost the entire amount is assimilated. A comparative table of the various food products on the market shows that the solubility, cheapness and constancy of the new product, with its great nutritive value and ready absorbability, render it far superior to anything of the kind yet produced.

The Use of Sugar After Severe Muscular Exercise.—Experiments of an interesting nature, the *Medical Record* says, have lately been made at the instigation of the Prussian war office to endeavor to decide the question as to whether the consumption of small quantities of sugar renders the tired muscles capable of renewed exertion. In order to obtain a practical result, the person who was made the subject of the experiments was kept totally ignorant of their object. On one day a sweet liquid was administered, containing thirty grammes of sugar; on the next day a similar liquid, containing a sufficient amount of saccharin to render it indistinguishable from the other as regarded taste. After a very large amount of muscular work had been performed it was found that better results could be obtained on the days when the sugar was given than on the days when saccharin was given. The blood had become very poor in sugar in consequence of the severe muscular effort, and the administration of a small quantity of sugar had a markedly invigorating effect.

Fig Coffee.—Within the last decade or so, numerous "coffee-substitutes," "health-coffees," etc., manufactured for the most part from cereal grains, have been placed on the market and extensively advertised by benevolent hygienists. None of them has proved particularly acceptable to the public—chiefly, it may be presumed, because of a lack of palatability. In Central Europe, *La Nature* in-

forms us, a preparation of dried figs, made by roasting and grinding the minto flour, is very largely employed for this purpose, more than 6,000 tons of the fruit being annually imported into Austria-Hungary from Asia Minor and Algeria. The product, though closely resembling coffee, is not sold under that name, but openly on its own merits, and is accounted vastly superior to chicory. "No good coffee without figs," is a current saying throughout the countries referred to. An infusion of roasted figs added to ordinary coffee in the proportion of one-third, not only neutralizes the bitter principle in the latter, but makes the beverage much more nutritious and less irritating to the nerves. Hence it may be freely partaken of by children, with whom it is a great favorite. The retail price is very low, but affords a handsome profit to the dealer.

California cultivators ought to get up a boom for fig-coffee in the United States.

Treatment of Paralysis Agitans.—In the treatment of the above disease Dr. R. Veerhagen (*D. Med. Woch.*, XXIV., No. 24, 1898) strengthens the extensor muscles by powerful faradization and subsequent light massage, and tranquilizes the flexors by administering atropine sulph. 0.25 mg., combined with 0.2 grn. of ergot and applying galvanic current. In this manner he claims to enable his patients to resume their occupations without any inconvenience.

Choice Between Sea Voyages from the Standpoint of Therapy.—Weber (*Zeitschr. F. Diaetet. und Physikal. Therapie*, 1899, Bd., III., No. 1; *Med. Rev. of Revs.*) divides voyages for restoration of health into seven classes, viz.: Across the Atlantic; to Maderia and the Canaries; to the West Indies; to the temperate or sub-tropical part of South America; to the Cape of Good Hope; to the East Indies and Far East; and to Australia and New Zealand. He naturally excludes from consideration all localities which are either too cold or too pestilential. Journeys across the Atlantic are too brief. except as a mere change far a hard working business or professional man.

Trips to the Canaries, etc., while brief, have produced wonderful results in cases of profund mental depression, neurasthenia, and in convalescence from severe affections. The great Humboldt praised Teneriffe as the finest spot in the world for recuperation.

Journeys to the West Indies must be made in the winter, and the Bahamas and Jamaica are the best localities to visit. Weber warns against St. Thomas as unhealthy. The West Indies are adapted only to those invalids who thrive best in a warm, moist climate

With regards to South America, it is best to go straight to Buenos Ayres or Montevideo, not only because the voyage is longer, but the locality is both cooler and healthier, and it is better from the social standpoint. This trip, including a sojourn after arrival, is especially adapted for phthisis in the second stage.

Personally, Weber likes the trip to Cape Colony better than any other. It takes only six weeks (from London) to make the round trip on the regular packet; hence it is an ideal short voyage for overwork, convalescence, etc. The consumptive will find many health resorts for a prolonged sojourn. The elevation of the South Africa plateau is one of the valuable elements in a sojourn in that country, analogous, in fact, to Colorado in the United States.

One objection to the Far East is the necessity of passing through the Red Sea, with its mean annual temperature of 90°. People who suffer from winter diseases, such as catarrh, bronchitis and rheumatism, may pass the cold months to advantage by a trip to China and Japan.

As the Cape Colony trip is the ideal for a short voyage, a journey to Australia or New Zealand is correspondingly admirable as a long journey. The round trip (from London) requires in the neighborhood of three months per steam vessel and twice as long by sail. It is, therefore, adapted for a higher degree of invalidism than the Cape Colony voyage.

The modern significance of sea voyages for health is bound up in the continual improvements in transportation and the multiplication of tourist agencies, by means of which people of moderate means are enabled to reach remote parts of the world and return home within a surprisingly short time, and at an expense not much in excess of the cost of living at home. For obvious reasons the sojourn at the terminal point is usually so short that it is entirely subordinated in importance to the voyage itself. Since under these circumstances most patients or travelers have to conform to the arrangements of steamship companies and tourist agencies, the physician's chief function is to determine the length of time necessary for restoration of the patient's health, and then to choose a trip of corresponding length, paying due heed to all such matters as the temperature of the waters traversed, the likelihood of storms, and the sanitary condition of the terminal point, all of which vary more or less with the season of the year.

Malt Soup in the Feeding of Infants.—Gregor (*Deut. Med. Woch.*, October 6, 1898) has used malt soup in more than 100 cases of infants with gastro-intestinal affections. In seventy-four very young infants the observations were extended over several months. Here the soup was given out in bottles in the polyclinic. The hygienic conditions of these infants were very unsatisfactory, and yet the results were good. The bodily development was arrested, and severe gastro-intestinal symptoms were present. In twenty-seven of the seventy-four cases complete recovery ensued; eighteen infants still under observation were so much improved that they might be looked upon as cured; thirteen cases were very much improved; in three cases there was no improvement. Of the seventy-four cases thirteen died, death being due in six cases to intercurrent disease. The results obtained with this malt soup were much better than those from Gaertner's fat-milk preparation. The malt soup contained but few bacteria. The mothers were told to keep it at 10° to 20° where it was possible. Thirty-four of the seventy-four cases were from three to nine months old, and twenty-three under three months. In infants over three months, with chronic gastro-intestinal affections, this malt soup should be tried and continued for several months. In younger infants it requires dilution. In children from nine to fifteen months, with severe rickets, this feeding should be tried. In artifically fed children in whom the nutrition is less satisfactory than in breast-fed children this malt soup gives as good results as other artificial foods. Feeding at the breast may be supplemented by one or two meals of this malt soup. Keller (*Ibid.*, September 29, 1898) describes the method of preparing the malt soup: 50 g. of wheaten flour are well mixed up with 1-3 litre of cow's milk and the mixture passed through a sieve. In another vessel 100 g. of malt extract are dissolved in 2-3 litre of water at 50° C., and to it are added 10 c. c. m. of an 11 per cent. solution of potassium carbonate. These two preparations are then mixed and boiled.

Night Terrors in Children Cured by Music.—Night terrors, so common in children imperfectly fed, and often occurring in others through faulty training, is now successfully treated by means of the music box. Night terrors never occur when the child is sound asleep. If the stomach is overloaded the crude, half digested food irritates, and we have a regular storm of nervous symptoms which terminate in fear. Very helpful has been found a music box set to play pleasant airs when the child is put to bed; otherwise intractable cases have been cured in this way. So with nervous invalids in general.

The Dangers From Water Closets on Trains.—The *New York Medical Journal*, quoting the *Manitoba and West Canada Lancet*. for October, 1898, says that Dr. R. S. Thornton, in a paper on "The Wind as a Factor in Spreading Infection," makes the following sensible remarks and suggestion:

"The second point concerns the public health authorities, and has to do with the water-closets in use on the railway trains. These are, for the most part, open chutes down which the excreta are projected to the railway track. Many people with ambulatory typhoid, and patients in various stages of the disease *en route* to hospitals or home, use these closets, and thus typhoid stools are spread along the railway, ready for distribution by the wind all over the neighboring country. The same thing might happen were cholera ever to obtain a footing on this continent; but apart from the specific danger in such diseases the method is unhygienic and offensive. It should not be difficult to attach a box below the chute and adopt some modification of the earth-closet, the excreta being removed and buried at divisional points along the line."

THE THERAPEUTIC PROPERTIES OF BUFFALO LITHIA WATER.

By John B. Shoemaker, M.D.

(From the *New York Medical Journal* of July 22, 1899.)

The peculiar virtues of the Buffalo lithia water appear to be owing to the mixture of salts which they contain, and, as regards spring No. 2, to the proportionately large quantity of the bicarbonate of potassium. They are likewise due to the perfect solution in which the salts are held, and, consequently, to the complete absorption and assimilation which result. In the alembic of nature more effective solutions are produced than the laboratory of the chemist can always prepare.

An additional advantage and extremely important reason for the peculiar efficacy of the Buffalo lithia water lies in the fact that its composition approximates that of the serum of the blood; therefore it is admirably fitted for absorption into the blood current and immediate incorporation with the watery portion of the nutrient fluid. It becomes at once identical with the blood serum. These are qualities which far surpass those possessed by any extemporaneous solution of a single chemical preparation, as when a lithia tablet, *e. g.*, is dissolved in water for immediate administration. When we speak of a dose, it is of a quantity altogether relative, and what the physician emphatically desires in a dose is therapeutic efficiency. This we have in the Buffalo lithia water.

Those who have made use of this water and carefully noted its effects have often been surprised at the results obtained from amounts so small, according to chemical analysis, of lithia and the accompanying salts. The explanation of this extraordinary activity is doubtless to be found in the conditions just adduced.

For the practical ends of therapeutics it suffices to know the properties of the agents which we employ. We are not always able to understand precisely how such properties are acquired. Abundant experience has shown that the Buffalo lithia water, by virtue of its lithia and the associated salts, is much more effective in some very important particulars than extemporaneous solutions. It exerts, for instance, a solvent action upon renal, hepatic, and vesical calculi more powerful than could be expected from a mere inspection of its chemical analysis. By sweeping uric acid rapidly out of the system it alleviates the miseries of gout. It is efficacious in rheumatism, Bright's disease, diabetes mellitus and a number of nervous affections. These defects of metabolism are all to be traced back to faulty digestion. In a paper devoted solely to clinical observation I shall not pause to inquire into the minutiæ of pathogenesis. We can, however, readily detect a vicious chain of relationship between the various maladies which I have mentioned. When we extend our view and contemplate the secondary ills and complications of rheumatism, gout, Bright's disease, and diabetes mellitus, we can more fully appreciate the virtues of a remedy which attacks the very root of the tree of morbid genealogy. "From generation to generation," indeed, its branches extend, and what is mild in the father may become severe in the son.

The Buffalo lithia water is doubly efficient in rheumatism and gout. It dissolves uric acid and phosphatic sediments as well as other products difficult of elimination, while at the same time it exerts a moderately stimulant effect upon the renal cells, and thereby facilitates the swift removal of insoluble materials from the body. Without such action insoluble substances will precipitate in the kidneys and bladder. The intense suffering produced by stone, together with consecutive pyelitis and cystitis, are avoided by prompt elimination.

Unquestionably, although the speedy removal of uric acid and other products of faulty tissue change is of conspicuous benefit, yet to prevent their formation is a service still more important. This service is performed by the Buffalo lithia water when it corrects those digestive failures which are responsible for the production of deleterious materials.

As stone is one of the most harmful and painful ultimate consequences of faulty digestion and assimilation, the solvent virtues of Buffalo lithia water constitute, perhaps, its highest merit. It has been instrumental in disintegrating large calculi of varying composition, as attested by clinical reports corroborated by chemical examination.

The report of several interesting clinical cases appears in other columns.

THE FŒTAL DEVELOPMENT OF MAN.

By C. S. Eldridge, M. D., Chicago, Ill.

How wondrous the power and subtle the plan
Which nature employs to formulate man!
There first appears a tiny cell,
With life endowed, and nourished well;
In form a protoplasmic germ,
As scientists employ the term.

This fragile dot of future man,
This blastoderm complex in plan,
Through oviduct doth make its way
As peristaltic forces play,
Till in a sulcus it is placed,
Expelled from duct we just have traced.

Within a warm maternal mold
Its changes soon are manifold;
With ample room in utero,
Strange forms of segmentation show.
Its bed with villi well supplied
Doth succor give on every side.

The delicate pellucid zone
In spheres of four quite soon are shown.
Around this embryonic mass
Soon transformations come to pass;
The laminæ in double fold
Protect the embryo they hold.

These laminæ of serous kind
Are soon quite spherically inclined;
And from this process going on
There is produced the amnion.
Secreting tubes are placed within
To furnish lubricant therein.

This lubricant, quite true to say,
Assumes protection's rôle to play;
It breaks concussions, shocks and blows,
Abets each movement, posture, pose.
That virtues it has we cannot deny,
In parlance obstetric it's liquor amnii.

When the fœtus acquires three months of age,
According to each obstetrical sage,
The mass placental duly shows
Out of the villi where it grows.
In form it's ovally inclined,
Quite like a plant of the sun-flower kind.

Out of its center vessels proceed,
Soon reaching the fœtus to nourish and feed.
With sixteen weeks of nurture and care,
The visible signs themselves declare;
The mother expectant her vigil renews,
She ceases her foibles and risks eschews.

Her instinct and maternal joy
Guard safely within her adorable toy.
Her love now differs from that before,
As she dreams of the treasure for her in store;
Her thoughts by day and dreams by night,
Of the unseen form, her boon of delight,

Make tolerant the watchful weeks
As she nearer approaches the day she seeks.
With her quickened love come pledges anew
To bear her ills whether many or few.
Thus buoyed up with love's resolve,
'Mid cares gestation doth involve

She calm and patiently awaits
Such throes and pains as labor creates.
When the undoubted signs of travail appear,
And the doctor doth bid her be of good cheer,
With pains and joyous hope combined
Her mother's heart doth solace find.

When the method of Crede has finished the case
There's a mother content with a radiant face.

MISCELLANY.

—Archælogical discovery has demonstrated that the ancient Egyptians, 3000 to 3500 B. C., were cannibals.

—To keep alcohol absolute place it in a sheet of gelatin, which by its affinity for water will maintain the strength.

—Plans have been drawn for an institute for the study of tropical hygiene and pathology in Berlin. Dr. Koch will be the director.

—The Royal College of Surgeons of England has conferred upon Dr. Frederick S. Dennis, of this city, the rare distinction of the honorary fellowship of the college.

—Dr. Schlatter, whose successful case of total extirpation of a cancerous stomach is well known, has been appointed to fill a newly erected chair of surgery in Zurich.

—The Paris Medical Faculty has awarded the Lacaze prize for the best contribution to the study of typhoid fever to Dr. Widal, Professeur Agregé of the Medical Faculty. The value of the prize is $2,000.

—From a sanitary point of view Dr. F. L. Oswald thinks that "Christian Science" is simply primitive Homœopathy without Hahnemann milk-sugar, just as primitive Homœopathy was Christian Science without prayer.

—Marvelous tales are being published in Italian newspapers of an alleged cure for tuberculosis discovered by Prof. Vincenzo Cervello, Professor of the Royal University of Palermo. Formalin administered hypodermically is the remedy.

—In rigid perineum Dr. Southworth says that "he who tries the following will never be disappointed. I consider it indispensable and infallible": Chloroform, 2 drachms; ether, 1 drachm; spirits cologne, 1 drachm. Mix and apply locally.

—Chloroform was recently administered in the street to a woman whose foot was crushed and caught between the wheel and platform of a street-car in Berlin. The car was raised with lifting jacks and the foot released in the course of an hour.

—François Le Merle, aged ninety-nine years, was oppressed with the idea that he could not die, so he went to a railroad crossing close by his home, near Perigueux, France, and threw himself in front of a midnight train. He was cut in pieces.

—A whistle, one inch in length and one-quarter inch in thickness, located by the X-ray process in the stomach of a three-year-old child, was successfully removed by surgical operation at the Emergency Hospital, Washington. The child is recovering rapidly.

—A laboratory for the application of the Roentgen rays was opened in Madrid on February 20 under the name of Instituto Radiografico de España. The institution, the installation and equipment of which are on a magnificent scale, is said to have cost some two million pesetas ($400,000).

—At the recent meeting of the American Association a Buffalo physician stated that the prohibition of the long-tube nursing bottle in that city had cut the infant death-rate in two. Eight out of ten of the deaths among children that formerly occurred were in infants using the long-tube bottle.

—Plans are well matured for the creation of a College of Comparative Medicine at Harvard University, an institution which will promote research work on original lines. Three hundred thousand dollars has been set aside for the erection and maintenance of a laboratory. Six hundred thousand dollars additional will be required.

—Mr. Astrakoff, a well-known Russian engineer, lately deceased, has left 1,000,000 rubles towards the foundation of a university for women in Moscow. The university is to comprise a mathematical, a scientific and a medical faculty. The council of the Moscow government has voted an annual subsidy of 3,000 rubles to the new institution.

—It is somewhat startling, says the editor of the *New York Medical Journal*, to learn from the *Journal de Médecine de Paris*, that last year seventy-seven illegitimate children were born in France of mothers over fifty years old. The French people may take heart respecting the decline of their birth rate if this is what their old women can do.

—A novel means of raising money was the Medical Dog Show, recently held for the benefit of the London School of Medicine for Women. No dogs were admitted except those belonging to physicians or students or their families.

—The pharmacy of K. J. Ferrin, at Moscow, Russia, is thought to be the largest in the world. Two hundred and ninety-three men are employed in the wholesale and retail departments. As many as 1,200 prescriptions are put up in one day. If poisonous drugs are used in putting up a prescription the checking of weights is done by a weigher specially employed for that purpose.

—Dr. R. J. Burns, of Sunderland, England, was called to see a drunken ne'er-do-well who had attempted suicide by taking a quantity of rat poison containing phosphorus. The stomach pump broke down and the brave doctor actually applied his lips to the tube and sucked out the deadly contents of his patient's stomach, thereby saving his worthless life—fortunately not at the expense of his own.

—The removal of foreign bodies from under the nail is rendered easy and comparatively painless by the following procedure: Apply a 10 per cent. solution of caustic potash to the nail directly over the foreign body, using a match as a convenient applicator. Scratch the softened nail with a piece of glass, and repeat the whole process until the offending object is reached, when it can readily be lifted up and removed.

—A singular case of blood poisoning has just been reported in London. A woman fell and slightly grazed her wrist and, to protect the injured surface, covered it with stamp paper, or strips of the gummed paper which borders the sheets of postage stamps. This adhered firmly and completely sealed the wound, but pain and throbbing quickly set in, septic symptoms developed, and death occurred within sixty hours.

—Seven towns in Belgium, including Bruges, have a sterilizing plant which cooks the meat from slightly tuberculous cattle. It is then sold, with the juice, at a low price and the proceeds given to the proprietor of the animal, which, with the indemnity accorded by the government, reduces to a minimum his financial loss. The minister states that in some places the demand for this wholesome and appetizing meat far exceeds the supply.

—Three classes of well-to-do patients are now admitted to the Paris public hospitals: Strangers or foreigners passing through the city, persons with infectious diseases, and persons from small towns requiring a severe operation that cannot be performed at the residence or in an ordinary sanitarium. The surgeons and physicians who attend them are protesting against gratuitously treating these persons, frequently abundantly able to pay, but no official notice has been taken of their complaint.

—A point of capital importance—and also the most difficult—in the surgical cleansing of the hands is the manner of dealing with the nails. Dr. Theodor Kocher thinks that the only good way is to cut the nails entirely away to the skin, leaving nothing to be done except rubbing with the brush, as other parts of the skin. He recommends rubber fingers for operations where nails cannot be cleansed sufficiently.

—At the recent Berlin Congress for the prevention of tuberculosis the death-rate in England from this disease was authoritatively stated to be the lowest in Europe, and that of London the smallest of the fourteen largest cities in the civilized world, with the exception of Naples and Buenos Ayres. Russia stands at the foot, with nearly four times the death-rate. This shows beyond doubt that, contrary to the popular belief, the higher the type of the civilization the lower will be the death-rate from tuberculosis.

—The *Journal de Médicine de Paris*, of April 27, says that a young woman of Frankenthal, Hesse, was accused of infanticide. The infant was supposed to have been thrown into the Rhine. The authorities sent word to the towns below along the river to search for the body. Each complied, and thirty-two infant cadavers were the result.

—According to the *Journal of the American Medical Association*, Surgeon-General Sternberg has approved a plan for the establishment of a school at the Washington, D. C., barracks for the instruction of hospital corps men in the preparation of food for the sick and wounded in the army. Authority has been given for the employment of an expert civilian cook. In case the plan proves successful similar schools will be established at other military posts.

ORIGINAL ARTICLES.

THE PHYSICS OF THE CIRCULATION IN THE NERVOUS SYSTEM.

By Herman Gasser, M.D., Platteville, Wis.

THAT we may better appreciate the theoretical deduction set forth in the above proposition, we will first call to aid some of the general conclusions that have become accepted in the scientific world as incontrovertible and demonstrable facts. Any theory that claims the careful and considerate attention of the students and thinkers of the world must be in harmony with every phenomenon of nature with which we are acquainted, and as the subject under discussion is therefore broad and comprehensive, it will only be possible to illustrate it here briefly along the line of general principles.

From the principle of the conservation of energy and the theory of evolution we are forced to the conclusion that every physical force that enters an organism must come out again as physical force. That in its various transmutations and transformations in an organism, no matter whether received as rays of light or waves of sound, as heat or taste, or in the various forms of food or pressure of contact, and transformed into life, with all its varying forms and phases, it is physical energy still, although it must be accounted for in the dynamics of life, and the study of the phenomena of which we call physiology.

Physiology, in harmony with anatomy, has demonstrated that the cerebro-spinal system, with its system of nerves that reach out to every part of the organism, has an ingoing or sensory movement by sensory nerves alone, a central elaboration in the cord and brain, and an outgoing or motor function carried out by motor nerves only. Considered from these general points of observation life is a phenomenon of nature.

While what we know of the general physiological life in the higher organisms leads us to the conclusion that the nervous system is in dominion over the rest of the functions of the living body, we must not forget that every cell is an active and continuous living force, that though seemingly at rest is ever active and never at a standstill, and of which the nervous system is but a general expression of their coherent and related activity as a unity, a centralization of administration. "We have," says Verworn, "in the central nervous system, a central organ which alone has the function of uniting cells, tissues and organs with one another, so that an advantageous co-operation of them becomes possible."

The cerebro-spinal system, with its sets of special nerves carrying energy to and from it, must be looked upon as living substance with which their life and function are inseparably connected. This is why it cannot be compared to a central telegraph or telephone station, with its sets of wires, although there is much similarity of kind. Neither can it be compared with the circulation of the blood through the heart, arteries and veins, for they propel the living blood through the living substance of the heart and vessels. Nevertheless, the circulation of the blood and in the nervous system have functions so in common that a comparison would bring out many points of interest, for the composition of each is made up of living substance, with an ingoing and outgoing system, and a great central organ.

The nerve substance proper of the nerves is composed of a stable semi-solid living substance, the function of which is to transmit nervous energy or force. It is not the substance of the nerves that circulates but the energy through its living substance. The irritability of the nervous system, like the irritability of living substance in general, "is its capacity of reacting to the changes in its environment by changes in the equilibrium of its matter and energy." (Verworn, "General Physiology," p. 353.)

As the cells, tissues and organs are never at rest, but continually taking in and giving out energy that is being carried continuously and incessantly by the sensory nerves to the central organ, the brain, for adjustment or equilibration, and again by the motor nerves to every cell and tissue in a continuous and never ending series, is it possible for the cell community to be held together as a unit in the organism? It is only because they work together in harmonious relation by the circulating energy of the nervous system that so complicated a body as an organism can be developed. It is because every part acts continuously, and all the parts co-operate as a unit, that the circulation of the nervous system must be a fact.

If life is a continuity, a never ending and ceaseless activity, a metabolism that is swinging between synthesis and analysis, nutrition and denutrition, conclusions admitted and supported by the evidence in every branch of science, then there is no escaping the deduction that a circulation in the nervous system is as great a certainty as is that of the blood. If the cell-life of the organism is continuous and its functions carried by the sensory nerves to the central organ for the purpose of community or unity of action, it must at once be inferred that this can be brought about only by the motor nerves, to keep them in the balance of function.

The very simplicity of this conclusion at once suggests the question, Why, then, has it not been discovered before? This, briefly answered, is because all mankind, up to the present time, has been interpreting all living phenomena from states of feeling and consciousness which we all know as ever changing, irregular and very intermittent. With such a foundation it must be evident that a circulation, continuous and incessant, of nervous energy, was contrary to experience. It is nevertheless a fact that all true science has been constantly treading upon and utilizing this theory more or less.

It is by the results and through the work of those late and young branches of modern biology and psychology that we have been led to the conclusion that states of feeling and consciousness are the result of the state of the bodily organization, and not, as has heretofore been held, that

states of feeling and consciousness cause the states of bodily organization, but especially functions. We cannot get away from the fact that life—of which feeling and consciousness is but an expression of its highest form of existence, is after all, a phenomenon of nature.

Man, throughout his long and varied career, from earliest dawn to the present time, has ever been reaching out and pushing his investigations into new fields, hoping, and often believing, that when this last summit was reached the curtain would be drawn and the problem solved. But every height, with its golden rays of hope and promise, revealed still greater ones beyond. The angel of doubt, veiled in the mist of mystery that allured him on, was always floating just behind and above another impassable barrier.

If, like the pure materialist, we say that out of the reaction of matter and motion all existence was evolved, we are no nearer the solution, for the mystery is still as great as ever, for, what are these ultimate phenomena out of which has been woven the world in all its wonderful existence as we know it to-day? The child and savage know as much of its ultimate reality as the most profound scientist and philosopher.

If, again, we assume that states of feeling and consciousness result from the expenditure of energy or force, as a result of the function of the brain, are we any nearer the solution of the mighty problem that has engrossed the attention of the world from its earliest dawn to the present time? What is matter, and what is force? The best that we can say is that they are unknown and unknowable forms of existence, of the reality of which we cannot have the slightest conception All that the student and scientist know is how these forces work, but of the why they are as much in the darkness as the veriest clod that ever trod the face of the earth.

If the investigations of scientific research should prove the lawful and orderly system of nature as true, it no doubt would have a great influence on our actions, for all the fads and isms hatched in the brains of developing and imaginative man would be wiped out of existence, and in their place they would direct their energies to harmonize their existence with the forces of the world, thereby developing it to ever increasing power, beauty and glory.

Leaving these general propositions, let us return to the investigation of some of the elementary functions of the nervous system. What is this vital nervous energy or force that circulates through the nervous substance? That we may form a clearer conception of what it consists, it is proper to state that there is a limit of the nervous substance to react to the stimuli of the external world. That there are varying kinds of nervous substances, each having specific energies to react to stimuli of a certain kind. It is this that makes, as Verworn says: "A natural classification possible in accordance with the forms of energy which the different stimuli represent; for the operation of every external agent upon a body depends upon its transformation of energy." The sensory nerves are specialized to react only to certain forms of stimuli, like the eye to waves of light, the ear to sonorous vibrations, or taste to material particles. This brings us back to the fundamental conceptions of "the specific energies of the nervous system," advanced by that most profound physiologist of the nineteenth century, Johannes Müller, whose doctrines were so well elaborated by Ewald Hering.

Every nerve stimulation has as its foundation a chemical transformation of the nerve substance, a transmutation of its reaction into vital nervous energy that is specific in kind, and is transmitted to the central nervous system and acts as a stimulus to the rest of the organism. This is their physiological function, the special phenomena of living nature, the investigation of life. It should also be remembered that the difference between the solid bodies, like bones, muscles and glands, in common with the liquids, like blood and bile, and the more highly and attenuated forms of energy transmitted through the nerves, is only a difference of mobility. That they are all related to and a part of the living organism. That they are all, in the organism, forms of life.

That certain sensory nerves only react to stimuli of a definite kind clearly demonstrates that they must have a varying molecular structure, although to all outward appearances they are alike. This again would force us to the conclusion that their special reactions would be different in kind, of varying wave lengths, and that the forms of nervous energy transmitted by the sensory nerves to the central organ must be of a variety of kind much greater than the varied forms of color sensations with which we are familiar, and which it is the multiform and complex function of that exceedingly complicated organ, the brain, to adjust or co-ordinate into a general unity, in the adjustment of which are developed all the states of reflex action, instinct, memory and will, that again are states of existence, the result of these reactions of adjustment in the brain.

This again suggests the question, Of what do these states of active memory and will consist? Why are they so transitory and ever changing? Are they the direct result of the expenditure of energy of the function of the brain in the form of heat and waste products of combustion, or are they immaterial states of existence? It must be generally admitted that it would be difficult and almost impossible for us to conceive how it would be possible to translate the material functions of the brain into immaterial states of existence.

In the physiological division of labor in the higher organisms the specialization of the function of the nerves is primarily to transmit the vital nervous energy with greatest rapidity and least resistance to the central organs, so that the ever active functions of the various cells and organs in their regular routine may work in unity and harmony. If this was not so life could not exist. That they perform their offices with despatch, it is only needful to refer to the experiments of Helmholtz, who demonstrated that stimuli are transmitted in man at the rate of about thirty-six yards a second, that it is slower as the organism is lower in organization. Not only this, but he says that in the brain it is about twelve times slower than in the nerves.

In its plastic substance the transit lines are not so well organized; they meet with greater resistance. Also, all the sensory nerves, with their great variety of nervous energy, transmit it to the central organ, thus increasing its inhibitory function in the process of adjustment. It is this conception of the physiology of the nervous system, in disease and health, that leads us to the conclusion that they give rise to states of feeling and consciousness, and also forces us to admit that the surplus energy must be drained away by the motor nerves to equilibrate all the vital forces of the organism into a general unity, and in the expenditure of which arise all the forms of reflex action and volition or will. This, again, leads us to the conclusion that consciousness, with its states of feeling and its moods, is a synopsis of the exalted, active, or waking state of the functions of the body, as interpreted in the brain. That while the life processes are continuous, they are not always equally active. That the circulation in the nervous system has its variations like that of the blood. That it has a minimum and maximum intensity of function, of which the automatic subconscious activities make up the great stream of its continuity.

Every local change of function produces a disturbance or change in the sensory nerve with which it is connected. This changed function of the sensory nerves being out of tune with the others in their adjustment in the brain, produces changed states of feeling, distress and pain. The terminal nerve end exposed in a tooth may cause an intense toothache, the result of exposure and change and excessive stimulation. "The seat of pain is seemingly in the local injury as an entity, a something inherent and distinct, yet every analysis leads us to the conclusion that it is a state of feeling relative to our own organism, and is dependent on the entire nervous system, of which all the internal processes in their entirety are the constituent elements. The local change of function is not painful until, by adjustment of all the functions of the organism in the brain it becomes a 'mental' state that rises into the field of consciousness. Pain is the name for the consciousness of the local change of function."—"*Pain, Pleasure and Consciousness*," *by Dr. H. Gasser*, "*Medical Age*," *Detroit, p. 676, 1897.*

This theory of the circulation of the nervous system gives us the only comprehensive and intelligent conception of what Herbert Spencer calls the "most involved and obscure" psychological problem, "pleasure and pain." "For my part (says Th. Ribot, p. 133 in 'The Psychology of the Emotions'), I am inclined to believe that a classification of pleasures and pains is an impossible task. In short, the science of 'pleasure and pain,' as L. Dumont somewhat emphatically calls it, belongs to the category of sciences which do not proceed by way of classification, since they do not as yet possess the material."

From what we know of the physiology and psychology of the nervous system, in common with the clinical reports, we are justified in the belief that a classification of pleasures and pains is possible. It is a well known fact that there is a limit in the sensory nerves of all kinds to assimilate sensations. There may be irritations so mild the nerves do not respond, or so violent that they are at once overwhelmed and inactive. It is a familiar fact that a limb may be so injured and disorganized by a great force as to cause immediate paralysis of function and death to the parts, and yet consciousness has no part in it at the time in the form of pain. The brain continues its function, although the nerves in the limb are destroyed, just as the heart would continue to beat, although the arteries and veins be crushed to a pulp. It is true that there would be shock that later might produce loss of consciousness and even death, but these would be the results of the efforts of restoration. A current of electricity so powerful that when properly applied it would kill, when passed through the extremities of the body for a very short time causes no sensation of pain whatever, but complete paralysis of function, and yet the subject may be conscious of everything that transpires. As there is a limitation of nerves to react to stimuli and transmit them to the brain, so there is a limit of the brain. It is a physical fact that the current of electricity is thousands of times more rapid than the circulating energy of the nervous system. A current of electricity such as is employed in electrocution, by the rapidity of its energy would so overwhelm and destroy the function of the brain by the continued action of the current, that it would be physiologically incapable of receiving sensations of any kind, even though that were possible, and thus demonstrates that electrocution is painless.

Pain, pleasure and consciousness cannot come into the field of existence, because the organ for their production is physiologically disorganized.

This idea is again well illustrated by the organism under the influence of chloroform The latest developments of the organism in the process of evolution are the highly complex and plastic cells in the frontal portion of the brain. Their function is inhibited or destroyed for the time by the influence of the chloroform upon them, while the better organized and instinctive functions of life continue. There may be produced prolonged and ordinarily very painful operations without the least evidence of pain or consciousness. The sensory nerves may perform their functions and send their sensations to the central organ, but there is no evidence of pain and consciousness, because the highest functions of adjustment that bring forth feelings and consciousness are paralyzed for the time. Shock may follow, like in the cases of injury with consciousness and no pain, and may even cause death, but it is also a measure of the power to overcome injuries, and that varies so greatly. Some sink with but slight injuries, while others seem to recover from the most destructive processes, because they have a large amount of stored up vitality upon which to draw in the hour of distress. This is why in persons of feeble constitution and in alcoholics, there is little power of resistance. They consume every day nearly all of their energy, and a slight injury or disease calls them into the beyond.

From whatever point of view we apply the theory of the circulation of the nervous system in every department of science, we find that it is in

harmony with them, and also elucidates many of the obscure problems with which we are confronted.

Mankind has up to the present time considered all states of feeling, thought and action as mutually independent forms of existence, while in fact they are only the consensus, the synopsis or inventory of all the different functions and cells of the whole organism.

The evidence of the development of the nervous system in the organism, in common with the evidence of the theory of evolution in general, clearly indicates that not only in the embryonic cell of man, but in the lowest forms of life, stimuli are conducted slowly, and only to its nearest surroundings. As it develops more, or rises higher in the scale of development, the stimuli are transmitted with ever increasing rapidity and distance. Also that there are organized gradually, to correlate the increasing forms of stimuli in the developing organism, nerves, or transit lines of organized experiences, that transmit their energy to the later and less organized development, the brain, where they are adjusted into ever increasing forms of existence. The higher we go in the animal series, the more we see the tendency of the nervous system to extend its dominion over all the rest by its highly developed functions of consciousness and feeling.

What is this consciousness? What are these states of feeling of which consciousness is a part, that have weighed like a nightmare upon the thoughts of mankind from the earliest times?

In the analysis of consciousness we open the great and shoreless ocean of thought, and no matter how profoundly we study it, whether in the vast and limitless world of microscopic life, the spectral analysis of the myriad of worlds in the sea of space, or the astronomic realm that by intution leads us into the stranded sea of infinity, it always reverts back to itself, to demonstrate that it is only a very limited and unknown bark upon an unknown sea, the expression of the organism's relation to the world upon which it reacts. This is his world, the world as it appears to him, and he lives within. His consciousness, the result of his bodily functions, is like the engineer at the throttle or the pilot at the wheel, to direct the movements of the body. The knowledge or truth known to us is but a small part of the great stream of natural phenomena. At best they are only the common experiences and reflections, methodized and corrected.

SOME LATE IDEAS REGARDING THE CURE OF HERNIA.

By G. R. Johnson, M. D., Philadelphia, Pa.

WHATEVER else the advocates of the radical cure of hernia may have gained in recent years in the way of better operations, etc., one thing they have fully demonstrated—the comparative safety of the operation. The final results in any series of cases are exceedingly difficult to obtain, owing to the impossibility of tracing the patients for a sufficient length of time, after operation, to make the statistics really conclusive. As might be expected from this fact, there are differences of opinion as to the propriety of operating in certain cases. But, as just stated, one argument against operating in doubtful cases has been practically removed. That is the danger to life as a result of the operation *per se*. With the recent advances in antisepsis and the general technique of surgery, the mortality has been reduced to almost *nil*, the greatest danger being in cases of large, irreducible hernia. In one series of 126 cases in Kocher's clinic there was not one death. Coley has collected reports of 10,500 cases with a mortality of nine-tenths of 1 per cent. This must not be considered as a reason for operating in every case, as, for instance, those where a patient insists upon it though not really necessary. But it is a fact to be considered and weighed in making a decision and in advising patients. The possibility of relapse in a given case assumes smaller proportions when considered as following an operation in which there is practically no danger than if there were a great risk to the patient's life in addition to the risk of the hernia again occurring.

Lebensohn (*Prog. Med.*, Vol. II.) is quoted as arriving at the following conclusions regarding the indication for operation, these being based upon his observation of a large number of cases in Kocher's clinic:

1. The radical operation for the cure of hernia does not involve any danger, and the chances of a definite cure are very great.

2. In irreducible hernæ, or those in which symptoms of incarceration are present, a radical operation is absolutely indicated.

3. Reducible herniæ, when they can be held back by a truss only in such a way as to cause the patient inconvenience, should be subjected to operation.

4. Operation should be performed when the patient, tired of wearing a truss, wishes to be cured by radical interference.

5. The operation is contra-indicated when the general health of the patient is poor; when diseases of vital organs are present, etc.

Coley's views on this question are: "The results following operative treatment of hernia have shown such remarkable improvement during the past decade that operation may now be advised in a much larger class of cases than in former days. At the present time I believe that operation is indicated in children over four years of age in whom a truss has been given a fair trial without marked improvement; furthermore, in cases complicated by fluid in the hernial sac (reducible hydrocele), which renders it impossible to effect a cure by mechanical means; all cases of femoral hernia, whether in children or adults, unless contra-indications be present, should be operated upon without delay, for the reason that cure cannot be effected by a truss. The practice of operating upon infants under one year of age, or even two years, unless in very exceptional cases, I believe, is open to serious criticism. Operation is indicated in very few cases under the age of four years, this opinion being based upon the following grounds:

"1. Not until this age has been reached can one

be sure that the rupture may not be cured by mechanical means.

"2. The danger attending operations in infants is, I believe, considerably greater than the risks of a possible strangulation, which is rare under the age of two years. Umbilical hernia in infants and children should, with rare exceptions, never be operated upon, for the reason that they are almost invariably cured by truss; but inasmuch as a cure by means of a truss is rarely attained after the age of maturity, operation may be properly advised in all cases of young adults. Operation is attended with little risk to the patient, hence the prospect of cure is extremely good. Operation should seldom be advised in patients over sixty years of age, nor should very large, irreducible herniæ, especially in stout women, be operated upon, since the risks are too great and the prospects of cure exceedingly small."

Eccles *(Brit. Med. Jour.)* believes that the use of hard rubber trusses will cure the majority of cases of hernia in children. The indications for the radical cure are: (1) When a child is being properly fed, but in whom a hernia after a fair trial is not retained by a suitable truss, so that there is little or no chance of spontaneous cure; (2) when part of the contents of the sac are irreducible; (3) when a truss has been worn for at least three years, but with no apparent cure of the protrusion; (4) when a child has reached the age of at least three years, but has never worn a truss; (5) when herniotomy has to be performed for strangulation.

Warden *(Lancet)* would lessen the number of operations by using systematic muscular development as a radical cure for hernia. He claims that the deeper of the two layers of the superficial abdominal fascia, the intercolumnar fibers, the aponeuroses of the internal oblique, external oblique and transversalis, and the transversalis fascia are all capable of great increase in vascularity, in muscular and aponeurotic substance, and therefore in thickness and resistance to the extension of any viscus. His method with a small reducible inguinal hernia is: (1) Keep the hernia within the abdomen continuously and permanently by means of a well applied truss; (2) systematically develop, by suitable exercises, to the greatest extent possible, the muscular and aponeurotic structure of the abdominal wall. The hernia must not be allowed to descend, as one complete descent may annul the results of weeks of treatment. A special truss should be used when the patient is in the bath, and on no account must the bowel enter even the internal inguinal aperture. Contrary to the advice generally given the wearers of trusses, he advocates the practice of all such muscular efforts as will not tend to force the hernia into its sac, and states that if the truss be a proper one, few reasonable exercises need be forbidden. He has under observation a number of patients in whom a great increase of development has obtained in three, six, or twelve months by persistent training. This may be done by the Swedish system, or better, by resisted movements with some of the "exercisers" in popular use. Three of the best simple exercises are: (1) The patient, with his hands at his sides, raises himself from the dorsal decubitus to a sitting posture twenty or thirty times, twice or oftener a day; (2) similarly, from the horizontal position, let both legs be raised from the ground almost to the perpendicular; (3) modify the first by raising the body sideways in a rotatory movement, and thus exercise the obliques.

It is not the intention of the writer to discuss in detail the various methods of operation for the radical cure of hernia. New ones, or modifications of older forms, are being constantly described. Bassini's operation, with perhaps some slight modification to suit the individual operator, is undoubtedly the favorite as yet. Fowler and Bloodgood have each advanced methods which are well adapted for certain cases. The operation for external inguinal hernia in use at Kocher's clinic gives promise of being an exceedingly useful one. An incision is made over the entire length of the inguinal canal and laterally, somewhat beyond the same. After thus laying bare the fascia of the oblique muscle of the abdomen and splitting the infundibuliform fascia, the sac is isolated from the cord. An opening is made in the external oblique fascia exactly opposite the internal abdominal ring, and a bent dressing forceps is passed (protected by the finger) through the canal in front of the cord and out at the anterior inguinal ring. The tip of the isolated sac is caught and energetically pulled back through the canal to the small opening in the external oblique fascia. The sac is then fastened laterally by three sutures upon the surface of the external oblique fascia over the lateral portion of Poupart's ligament, the largest portion being then cut off. The inguinal canal is then narrowed by deep canal sutures, special care being taken that the suture nearest the proximal portion of the hernial sac be laid deep, the cord being protected by the fingers. One of the principal advantages of this method, described as above by Coley, is that the inguinal canal is not opened. Results in 105 cases with 111 herniæ show four recurrences, or three and six-tenths per cent. None of these relapsing cases were operated upon by Kocher himself, but by assistants, and it is but fair to assume that the technique was not perfect.

Considerable discussion is on as to the best method of suturing and the proper suture material to be used. Barker *(Brit. Med. Jour.)* uses hard-twisted Chinese silk, boiled in a 1 to 20 carbolic solution, in all cases except ventral and umbilical hernia. These came out or had to be removed in twenty-one of 200 cases. Long-continued suppuration is apt to weaken the abdominal wall in these cases. Such cases require medical attention and cause personal discomfort. These disadvantages might be overlooked if non-absorbable sutures gave better results than others, but they do not in the estimation of many writers.

Coley is strongly opposed to the use of non-absorbable sutures. Silk, silkworm gut, and silver wire were all represented in twenty-seven cases in which sinuses developed, one as late as three years and eight months after operation. Chromocized kangaroo tendon is his preference, but even chromocized catgut answers quite well. The skin incision is closed with sutures of fine catgut. These are en-

tirely absorbed at the time of the first dressing, and the chances of secondary infection are believed to be less than when any suture that has to be removed is used.

At the recent meeting of the American Medical Association, Reed, of Wyoming, stated that in his experience strong, flexible and absorbable animal tissue should be used for sub-cutaneous sutures and that non-absorbable material should be used for approximating the integument. After trying different kinds of animal tissues prepared by different methods, he now uses and obtains the best results from pyoktanin catgut. The catgut is first immersed in ether for not less than four days, then wound on glass spools and placed in a solution of 1 to 1,000 of pyoktanin in absolute alcohol, after which the jar with its contents is sterilized for one hour under pressure. Other methods of sterilizing are objected to because animal tissues are overhardened.

At the same meeting the use of silver wire as a suture material for the closure of wounds found an advocate in Harris, of Chicago, who said: "I cannot speak too highly of the longitudinal silver-wire suture in the radical operation for hernia, as the results have been so very gratifying. There are no absorbable sutures to soften nor no absorbable sutures to come out at some future time. Another advantage is its rigidity; it can always be sterilized; does not convey infection to the deeper tissues; edges of wounds are more co-aptated than by other methods; the narrow linear cicatrix is a great improvement in a cosmetic sense; the suture will withstand any desirable amount of traction without yielding; it is easily applied."

In conclusion it may be said that operation for the radical cure of hernia may be advised much more freely than ten or even five years ago, owing to the increased effectiveness and lessened danger of such a procedure. Still there are many cases, especially in older people, where conservative treatment by means of a truss is undoubtedly the better plan to follow. The fault in a great many of these cases, which causes annoyance and the desire of the patient for operation, is an ill-fitting truss. Too much care cannot be exercised in the selection and fitting of these appliances. In some few cases it may be necessary that the physician or other persons procure the truss for the patient. These instances are rare, and it should never be done unless absolutely unavoidable. The patient should visit the truss maker or seller and be measured and fitted as he would be for a pair of shoes or a suit of clothes, only with a great deal more care. He should not be satisfied until the truss fits perfectly, retains the hernia and is comfortable. More of the latter requisite can be attained than is usually imagined, and a great deal of annoyance and even actual suffering thus prevented. Then when a well-fitting truss is obtained an exact duplicate should be made, and kept by the patient. This aids in the matter of cleanliness, but is of greater importance as a safeguard in the event of one being broken while in use.

Even the surgeons will soon have to envy the bacteriologist. Koch is said to have asked of the Cape Colony Government the modest fee of $250,000 for his work on the rinderpest.

THE ETIOLOGY, SYMPTOMATOLOGY, AND TREATMENT OF EXOPHTHALMIC GOITRE.

By A. G. Ellis, M. D., Philadelphia, Pa.

An examination of the literature upon the subject of exophthalmic goitre shows a decided variance of opinion among members of the profession in regard to this interesting disease. First described with anything like accuracy in the posthumous writings of Parry in 1825, it was recognized as an entity and fully discussed by Graves in 1835, and by Basedow in 1840. As a consequence both of these latter names are still applied to the affection. With the great advance of medicine along all lines during recent years, and especially so in pathology, considerable attention has been directed to ascertaining the cause of the condition in question. Besides numerous less important theories and explanations, there are at present two well defined ideas in regard to the causation of exophthalmic goitre. One is that the disease is a pure or sympathetic neurosis. The other view, which has been steadily gaining adherents of late, and which may be said to represent the result of the most modern research into the subject, is that the disease is primarily an affection of the thyroid gland.

In favor of the neurotic view is cited the onset, after profound emotion, the absence of lesions, and the cure which has followed in a few cases after operation upon the nose. Tyson says the neurotic nature of the disease is now generally admitted, and most recently the medulla oblongata has been selected as the site for the lesion. This view has the support of some experimental evidence, and in a few autopsies changes have been found in the medulla. The view that it is a sympathetic neurosis has always commended itself, appearing as it does to explain the symptoms more satisfactorily than any other—the frequent pulse, the exophthalmos, the thyroid palpitation, the sweating, and the general nervousness are all best thus explained. George H. Cobb admits that it is due in some cases to derangement of the sympathetic system, but says that the toxic theory seems to account for all the symptoms. Osler says that worry, fright and depressing emotions precede the development of the disease in a number of cases, and Tyson states that sudden mental shock, worry and grief, and physical fatigue are assigned as exciting causes. It also occurs with especial frequency in neurotic families. These would point to the probable nervous origin of the disease, but the author last quoted adds that some of these cases, following the influences noted, are more likely to be coincidences. The good results which have followed resection of the cervical sympathetic in some cases would lead one to believe that the disease was due to a sympathetic neurosis. In other cases, however, this operation has had not the slightest effect upon the symptoms present, and this again would point to some other cause as being the underlying one in those cases.

In support of the theory of thyroid intoxication there is much evidence that seems to be conclusive. Osler comments on this point as follows: "Of late years the view has been urged, particularly by Moebius and by Greenfield, that exophthalmic goitre is

primarily a disease of the thyroid gland (*hyperthyrea*), in antithesis to myxœdema (*anthyrea*). The clinical contrast between these two diseases is most suggestive—the increased excitability of the nervous system, the flushed, moist skin, the vascular erythism in the one; the dull apathy, the low temperature, slow pulse, and dry skin of the other. The changes in the gland in exophthalmic goitre are, as shown by Greenfield, those of an organ in active evolution, viz., increased proliferation, with the production of newly formed tubular spaces and absorption of the colloid material, which is replaced by a more mucinous fluid (Bradshaw lecture, 1893). The thyroid extract given in excess produces symptoms not unlike those of Parry's disease—tachycardia, tremor, headache, sweating, and prostration. Beclère has recently reported a case in which exophthalmos developed after an overdose. Use of the thyroid extract usually aggravates the symptoms of exophthalmic goitre. The most successful line of treatment has been that directed to diminish the bulk of the goitre. These are some of the considerations which favor the view that the symptoms are due to disturbed function of the thyroid gland, probably to a hypersecretion of certain materials, which induce chronic intoxication."

Georgiewsky (*Zeit. f. Klin. Med.*, Band XXXIII., Hefte 1 and 2), has conducted some experiments which tend to prove that the symptoms of exophthalmic goitre are due to hypersecretion from the thyroid gland. Dogs and rabbits were fed with preparations of thyroid, and there followed symptoms closely resembling those of Graves' disease—*i. e.*, tachycardia, increased respiration, polydipsia, glycosuria, and, later, general depression and disturbances of the digestive organs and of the nervous system, which latter were more marked in young animals than in old ones. When the administration of thyroid was stopped the animals recovered, unless the nervous symptoms were too far developed. In none of these cases was either exophthalmos or goitre produced, however.

A. V. Notthaft (*Centralbl. f. innere Med.*, April 16, 1898), records an interesting case in which a man took for obesity nearly 1,000 5-grain tablets of thyroid extract within five weeks. After the first three weeks he began rapidly to develop the symptoms of acute Graves' disease, with all the characteristic signs. When the thyroid extract was stopped and the patient was put upon arsenic all the symptoms disappeared quickly, excepting the eye-changes and the goitre, which were still notable for about six months. The headache and pains which are so common in thyroid poisoning were absent, and all the symptoms of exophthalmic goitre were present, so that Notthaft believes that it was an actual acute Graves' disease. He expresses the conviction that this disease is due to qualitative changes in the thyroid secretion, and thinks the occasional good effects from the use of thyroid gland may be due to the fact that the patient is unable to secrete the proper quantity of the normal product of the gland, and does secrete a product which is abnormal and which causes poisoning. After a very elaborate study of the literature, the author insists that the only theory of causation of the disease that is justified is that it is due to changes in the thyroid gland.

Stengel, in his recently published "Text-Book of Pathology," says that "the pathology of the disease has not as yet been fully determined. It seems likely, however, from recent investigations, that the thyroid disease, from whatever cause it may result, is the primary disorder. Removal of large parts of the gland has been found to control the symptoms of Graves' disease in a large number of cases, and the feeding of thyroid extract for a long period of time produces symptoms like those of Graves' disease. According to the view here expressed, the symptoms which together constitute Graves' disease are probably due to overproduction of thyroid secretion; they are, in fact, the result of *hyperthyroidism*. The opinion, however, is held by others that Graves' disease is primarily an affection of the nervous system."

Heredity seems to be a factor in the etiology of some cases of the disease, though such cases are somewhat rare. H. A. Hare speaks of a girl who had exophthalmic goitre being in the clinic of the Jefferson Medical College. There seemed to be no doubt of the existence of heredity in her family, as the girl's mother, grandmother, mother's two sisters, and two of her grandmother's sisters, had had the same disease. Bayard Holmes (*Philadelphia Medical Journal*, June 11, 1898), reports a family form, embracing four children in a Swedish family, showing the three cardinal symptoms and a number of the minor conditions found in the disease. The causation is not explained. The family is living under tolerably healthful conditions and there is no hereditary history.

The cardinal symptoms of the disease are such as to be easily recognized. There is some difference among writers on the subject as to the place *tremor* should have in the list of symptoms, and its relative importance in assisting in diagnosis. One classes it as a part of the general symptom of *nervousness* and claims that it does not appear, as a rule, until the other symptoms have been present for some time. Others state that it is of great importance in the diagnosis of the early cases. Much has been said of Graefe's sign or the lid failing to follow the eye when it is cast down or raised. This, however, is rather a rare symptom, occurring in severe cases when the exophthalmos is very decided. It was not present in any one of seventeen cases examined in Osler's clinic.

J. Hinshelwood (*British Medical Journal*, June 25, 1898), reports a case which presented some peculiar eye symptoms. Under treatment by antipyrin the retraction of the upper lid (Stellwag's symptom) disappeared, while the failure of the lid to descend upon downward movement of the eye (Graefe's symptom) remained unchanged. These two symptoms are regarded as being due to the same cause, viz., spasm of Müller's muscle, supplied by the sympathetic nerve, and the complete disappearance of one with the persistence of the other, would indicate that some other mechanism must be in play. The author is inclined to attribute Graefe's symptom to a central disturbance of the oculo-motor muscles. He also insists upon the importance of recognizing that a unilateral exophthalmos may be the first indication of this disease.

The course of the disease is generally slow as to

its onset, and of protracted duration. Some cases, however, are so rapid in their development as to make the acute, as well as the chronic form, recognizable. "In a patient of J. H. Lloyd's, of Philadelphia, a woman aged thirty-nine, who had been considered perfectly healthy, but whose friends had noticed that for some time her eyes had looked rather large, was suddenly seized with intense vomiting and diarrhœa, rapid action of the heart, and great throbbing of the arteries. The eyes were prominent and staring, and the thyroid gland was found much enlarged and soft. The gastro-intestinal symptoms continued, the pulse became more rapid, the vomiting was incessant, and the patient died on the third day of the illness. Only the abdominal and thoracic organs could be examined, and no changes were found. Two rapidly fatal cases occurred at the Philadelphia Hospital, one of which had marked cerebral symptoms. In a case reported by Sutcliff death occurred within three months from the onset of the symptoms, owing to repeated and uncontrollable vomiting."

In regard to the mental condition of patients suffering from exophthalmic goitre Hare remarks, in his clinic, that in some cases there is terrific mental depression, especially in women. One woman under his care developed homicidal tendencies. She did not so much possess the desire to do murder as the thought that she might do such a thing. While watching her children play the thought would come to her, "What if I should murder one of them?" This would at times become so strong that in fear she would go to her physician to seek relief from her morbid state. He, however, has never known of a case where actual homicide has occurred.

The treatment of exophthalmic goitre, as naturally would be the case in a disease not thoroughly understood, is very varied, both in method and results. However, as before stated in speaking of the etiology of the disease, the plans of treatment which are at present most successful are those which lessen the action of the thyroid gland and diminish its secretion, normal or abnormal, as that may be. This result may be attained in some degree by drugs, but more surely by the removal of more or less of the gland itself. This is attended with a certain amount of danger, however, and hence the question regarding the propriety of operating for the relief of these cases becomes a serious one.

Osler, in the latest edition of his "Practice of Medicine," sums up the treatment of the disease as follows: "Medicinal measures are notoriously uncertain. The combination of digitalis and iron may be tried, and when there is anæmia, often does good. I have never seen any advantage from the use of aconite or veratrum viride. The tincture of strophanthus will sometimes reduce the rapidity of the heart's action. Ergot is warmly recommended by some writers. Belladonna gives relief occasionally, and should be administered until the dryness of the throat is obtained. I have seen one case of apparent cure under its use. No measures are so successful as rest in bed with an ice-bag or Leiter's tube applied occasionally over the heart, or, what is sometimes more agreeable, over the lower part of the neck and manubrium sterni. I have known the pulse to be reduced in this way from 140 to 90. Electricity has been much lauded, and instances of cure have been reported. In many cases temporary improvement certainly follows the use of the galvanic current. Erb states that the anode should be placed over the cervical spine and the cathode upon the peripheral nerves. The use of the thyroid extract has not been successful. The treatment of the disease by small doses of opium has been successful in some cases (Musser). Operative measures seem to offer the greatest relief. Removal of one lobe of the gland, and exothyroplexia, and tying the arteries of the gland have all been tried. The patients, as a rule, stand the anæsthetic badly; death on the table is more frequent than the published records indicate. Recently good results have been reported from the division of the cords of the cervical sympathetic."

Tyson reaches these conclusions: "Rest and protection from excitement are essential conditions to a successful treatment. After this the treatment is directed to the symptoms mainly. The remedies most used are the bromides and digitalis; digitalis to slow and steady the pulse; the bromides for two reasons: (1) as nervous sedatives, and (2) for their reputed action in producing anæmia of the nerve centers. In some cases, where there is no cardiac lesion and the pulse is good and strong, aconite with the bromides is of service. There is a difference of opinion as to the propriety of administering iron. I believe the decision should be based on the condition of the patient and the presence or absence of anæmia. Special efficiency has been claimed for the tincture of nux vomica by J. Newton Hunsberger, of Skippack, Pa., who called my attention to it. Dr. H. gave it to a well marked case, beginning with doses of 25 drops, increasing to 50. In three months after the treatment commenced the patient was able to do all her work, and has continued well ever since. The results of operative treatment have been somewhat satisfactory."

F. X. Dercum does not believe in combatting the symptoms of the disease. In his clinic at the Jefferson Hospital, January 6, 1899, he presented a man, thirty-one years of age, who had typical Graves' disease, and in the course of his remarks said: "The treatment of this affection is a matter of great dispute, some claiming that well marked cases never get well. This is contrary to my clinical experience, as some improve and some get entirely well. In former years I paid attention to the rapid heart action and gave digitalis, veratrum viride, etc. Of late years I let the cardiac symptoms alone. Do not give something to cover up the symptoms and mask the disease, but strike at the root. I find the glycero-phosphate of sodium or calcium of great value. It reduces gland activity and gives general good results. One recent severe case under my observation showed great improvement under the administration of 20 grains of the glycero-phosphate of sodium three times a day. Withdraw stimulants and stimulating foods. Give plenty of milk, and the glycero-phosphate diluted, after meals." On March 3 another case was shown in the same clinic, in which decided improvement had taken place after being put upon the above treatment. H. A. Hare, in a clinic at the same hospital, March 9, 1899, showed a patient, also a young man, and said that one of the best drugs for these cases was veratrum

viride. He gave two drops every eight hours, gradually increasing the dose for effect. In some cases he finds the tincture of gelsemium to give good results.

The operative treatment of exophthalmic goitre includes several methods. As to the propriety of operating J. Chalmers Da Costa says only those cases should be operated upon in which medical treatment has proved futile or in which there is profound toxemia or excessive dyspnœa. If the operation is performed, neither ether nor chloroform should be given, as either of these agents will greatly increase bleeding and prove dangerous. Operation is to be done under local anæsthesia (eucain, cocaine, or Schleich's fluid). A. Sänger (*Munch. Med. Woch.*, April 6, 1897), questions the propriety of operating upon the thyroid in Graves' disease and emphasizes the danger of such interference. In one case of his own the right lobe of the thyroid gland was removed. At first palpitation was a little improved, but the other symptoms were aggravated, and the case was worse than before the operation. Schulz (*Berlin Klinik.*, June, 1897), reports fourteen cases treated by the partial removal of the thyroid. Most cases were severe. Twelve of the patients were completely cured and able to resume ordinary occupations. In two the operation was followed by much improvement, exophthalmos alone remaining, with a tendency to further improvement. The experience of the author is that partial thyroidectomy in the majority of instances produces a cure which is permanent.

The treatment of exophthalmic goitre by resection of the cervical sympathetic is advocated, and a case reported by Gérard-Marchant and Abadie (*Presse Méd.*, July 3, 1897). The theory upon which they base the operation is that exophthalmic goitre is due to excitation of the vaso-dilators of the cervical sympathetic, and that accident following either entire or partial removal of a goitre is due to derangement of the sympathetic nerves, and not to the absorption of thyroid secretion. In the case reported exophthalmia was marked, and the cervical sympathetic was removed from both sides. The operation was not followed by disagreeable symptoms. At the end of ten days the eyelids could be closed completely over the eyes. In other cases reported, however, this operation has had no effect.

Rodocanache (*Lancet*, October 9, 1897), reports four cases of goitre removed by operation, and comments on certain dangerous symptoms which may follow. Three of the cases were under the care of Horsley and one under the care of Heath. The annoying symptoms are restlessness, rapid pulse and respiration, accompanied by considerable mental activity, and often fatal result. The dyspnœa does not depend on obstruction, nor the pulse and respiration on hemorrhage, these conditions being due to excess or deficiency of thyroid secretion. The researches of Gull, Ord, and Kocher have shown that myxœdema may follow extirpation of the thyroid gland, but the apathy and dullness, slow pulse and respiration of this disease bear no resemblance to the symptoms following thyroidectomy. In two of the reported cases cysts were removed from the thyroid and a considerable quantity of fluid escaped into the wound and was probably taken into the lymphatic circulation, and the symptoms noted followed. The author concludes, therefore, that there is an intimate relation between cases of this character and exophthalmic goitre, due to an excess of thyroid secretion in the circulation. The question can only be settled by experiment, and he urges the importance of guarding against these serious symptoms by taking as much care to prevent the contents of a thyroid cyst entering the wound as a surgeon takes in dealing with a fluid tumor of the abdomen. Should the symptoms arise, morphine, hypodermically, promises the best result. Of interest in connection with this view is a fatal case of thyroidectomy in a girl of fifteen, reported by Paul (*British Medical Journal*, January 1, 1898). The goitre was rather large, and one lobe and the isthmus were removed. About twenty-four hours later symptoms resembling Graves' disease developed, which increased in severity until death, two and one-half days after the operation. Small doses of morphine were given several times. At the necropsy the wound showed lack of healing-action, and was filled with a watery fluid. The lungs were slightly congested; the other organs were healthy, except the liver, which was very fatty and nodular from idiopathic cirrhosis. The author concludes that death was not due to the condition of the liver, but rather to the absorption of an excessive amount of thyroid secretion. A subsequent case was relieved by packing the wound with gauze, which absorbed the secretion. Paul suggests the ligation of the severed isthmus and avoidance of undue handling of the gland would avert danger.

W. W. Keen exhibited a patient in his clinic at the Jefferson Hospital, April 5, 1899, in order to show the improvement following operation. The swelling of the gland was unilateral. Supra-renal extract was tried for six weeks, but this did not do the slightest good. The patient's pulse was from 110 to 120 at the time of operation in January, when the right part of the thyroid was removed. The improvement during the less than three months since the operation had been marked. At the time of the clinic the patient's temperature was 98.4°, pulse 82, and eyes normal. The conclusion reached was that operative treatment had accomplished a great amount of good in that case, although not all had been so successful.

CEREBRO-SPINAL MENINGITIS.

By Jas. G. Brubaker, M. D., Philadelphia, Pa.

CEREBRO-SPINAL MENINGITIS is an infectious disease caused, doubtless in all true cases, by the diplococcus intracellularis discovered by Weichselbaum. The pneumococcus was long thought to be the cause of the disease in some cases, especially the sporadic ones. This was probably due to the fact that a pneumococcus meningitis difficult to distinguish from the true cerebro-spinal type is sometimes set up during the progress of lobar pneumonia. Under the thorough investigation of all cases of the disease at the present time, evidence that the diplococcus intracellularis is the true cause is rapidly accumulating. One observer, however,

basing his views upon the results of twelve autopsies made during an epidemic in Paris, contends strongly that the causative organism is a degenerate form of the pneumococcus. The organism has a low vitality, and is very difficult to cultivate, which may explain the slight infectiousness of the disease as compared with its lesions and general severity.

The manner of infection is not as yet clear. Personal contact, air-infection and carriers have all been asserted as the means by some observers. Actual transmission of the disease to physicians or attendants rarely, if ever, occurs, and direct contagion cannot be regarded as proved. However, Wilson, Anders, and others advocate the isolation of all cases as a precautionary measure, because of the micro-organismal origin of the disease, and this is certainly the safer course to adopt. It is not certainly known whether the organism gains ingress by the respiratory or alimentary tracts. Some observers report coryza as occurring at the beginning of an attack, and believe that the organism enters through the nasal mucous membrane. Coryza was noticed in only one of the 111 cases occurring in the Boston epidemic. In ten of the nineteen cases examined, an organism morphologically like the diplococcus intracellularis was found. This was also found in some persons not suffering from the disease, and Schiff has observed it in the nasal secretions of twenty-seven persons having various chronic diseases. In these cases the condition of the nose was normal, or had only a mild chronic catarrh. From observations thus far made, it is impossible to say that the nasal mucous membrane is the place of entrance, or even to say that the nasal infection may not be secondary to the meningeal in any given case. This fact mentioned will at least help explain the occurrence of meningitis after fractures of the skull involving the nasal vault, but it impairs the diagnostic value of the presence of the organism in the nasal secretions of suspected cases of cerebro-spinal meningitis.

The symptomology of the disease is very variable, it being marked by a clinical course of great irregularity. Hancock, of Kentucky, states that headache, backache, nausea, vomiting, constipation, delirium and fever are common symptoms found among the sick, but when these are severe, with opisthotonos, paralysis and a discolored, spotty skin, the case is probably one of cerebro-spinal meningitis. Osler makes three groups of cases, the malignant form, the ordinary and anomalous forms. The first has a sudden onset, usually violent chills, headache, somnolence, spasms in the muscles, great depression, moderate elevation of temperature and feeble pulse. Death occurs in a few hours in some cases. In the second form there may be premonitory symptoms, but the onset is commonly with headache, chills and vomiting. The pulse is full and strong, there is early painful stiffness of the muscles of the neck; photophobia and great sensitiveness to noises develop. In severe cases there is opisthotonos, and motor symptoms are characteristic. Tremors of the muscles may be present, with tonic or clonic spasm in the limbs. Strabismus is a frequent and important symptom. Delirium of various kinds is followed by stupor. Herpes occurs with greater frequency than in pneumonia or intermittent fever. Petechial rash is variable. In some epidemics it is present in a large number of cases, in others in but few. The course of the disease may range between a few hours and several months. A sudden fall of the temperature is of bad omen. Among the anomalous forms he names the abortive, intermittent and chronic types. In regard to the latter an attack may last from two to six months and cause the most intense marasmus. It is characterized by a series of recurrences of the fever, and may present the most complex symptomatology. It is not improbable that these protracted cases depend upon chronic hydrocephalus or abscesses of the brain. Royster reports a case in which a relapse occurred on the thirteenth day. About the seventh week the patient became very low and could not move himself in bed. Alternating doses of strychnine and morphine and all the whiskey he could take were given. Improvement began, and the patient was practically well by the sixty-fourth day. The next day convulsions came on suddenly, and death followed in a short time. This would seem to partake of the intermittent type, though extremely irregular.

The diagnosis of cerebro-spinal meningitis in its early stages, especially in sporadic cases, is sometimes difficult. Lumbar puncture is now regarded as one of the surest methods of deciding a case. If done antiseptically this measure is at least harmless, and many observers believe that it even has therapeutic value. Da Costa has spoken of this as being a rather aggressive means of diagnosis, but it is rapidly coming into favor. An antitoxin needle or trocar is used, and the puncture is made between the second and third or third and fourth lumbar vertebræ. The needle should be inserted 1 cm. to the right of the median line and directed upward and inward. If bone is met with the needle should be partially withdrawn and thrust more toward the median line, lateral movements not being made for fear of breaking the needle or causing hemorrhage. Fluid is obtained at a depth of 7 to 8 cm. in adults and 3 to 4 cm. in children, aspiration not being necessary. Smears and cultures should be made from the fluid obtained. The organisms are more apt to be found early in the attack, when diagnosis from the symptoms is difficult. Lumbar puncture should be made in all cases, most especially in sporadic ones. König's sign is much relied upon of late as a diagnostic point. It consists in the fact that the knee cannot be completely flexed while the patient is in the sitting posture, but can be done readily when in the recumbent position. This sign may disappear early or may persist. It is not present in tubercular meningitis, and has led to the detection of meningitis complicating typhoid fever. Leucocytosis is present in cerebro-spinal meningitis, which may help in distinguishing the disease from typhoid fever. As before stated, the presence of the diplococcus intracellularis in the nasal secretions can be given very little, if any, diagnostic value, because of its being found in healthy persons, or in those having an entirely different affection than meningitis.

No effectual method of treatment for cerebro-spinal meningitis has as yet been found. Certain

lines of treatment seem of avail in individual cases, but when tried in others are of no benefit. Tyson states that the treatment should be symptomatic and supporting. The symptom demanding the promptest relief is the pain, and for this there is no substitute for opiates. Of these the best is morphine, and it should be given hypodermically. It may be combined with small doses of atropine. When there are spasms or convulsions there is no remedy equal to chloral. If it cannot be administered by the mouth, a drachm dissolved in two ounces of water may be given to an adult, without hesitation, by the rectum. The bromides may be used as adjuvants in mild cases, but of themselves they are altogether inefficient. Nourishment should be of the best, and given by the rectum when the stomach refuses to retain it. One case thus nourished for several days recovered after being despaired of. Alcohol is contra-indicated in the early stages, unless there be unusual adynamia. Later, when exhaustion begins, it may be used and pushed as in other diseases with similar conditions.

Osler says that local abstraction of blood by wet cups on the nape of the neck relieves the pain, but general blood-letting is rarely indicated. Cold to the head and the region of the spine is of great service. Hydrotherapy should be employed if the temperature is above 102.5°. This is reasoning from the remarkable effects of the bath in typhoid with pronounced cerebro-spinal symptoms. If any counter-irritation is thought necessary, the skin of the back of the neck may be lightly touched with the Paquelin thermocautery. Blisters are of doubtful benefit.

J. C. Wilson mentions the application of heat to the extremities at the same time that cold is being applied to the head and perhaps the spine, as giving good results for some observers. Billets of wood wrapped in flannel and laid beside the patient's legs may be used for this purpose, or even hot water bags. He insists upon the importance of large and frequent doses of opium. Patients with this disease have a remarkable tolerance for opium. One to two grains may be given every two or three hours. In speaking of these heroic doses he states that he has at times given such a dose every three hours for a period of ten days to enteric fever patients, and has seen no ill effects follow its exhibition. The bowels have been locked up for several days, but spontaneous evacuation has occurred at the end of this time. He has never seen a case of impaction resulting from this treatment. He favors an initial purge in the beginning of the attack of cerebro-spinal meningitis, and the use of the iodides during convalescence when there is an organizing exudate.

J. M. Da Costa showed a case of the disease in his clinic at the Pennsylvania Hospital, March 18, 1899. The patient was a boy of seven years, who had always before been particularly healthy. The symptoms were well marked, with the exception that no petechial eruption was noticed. The patient was steadily recovering when shown. This fortunate result was considered rather exceptional. The treatment had been the persistent application of ice to the head and mustard to the nape of the neck. Five grains of the bromide of potassium in twenty minims of paregoric was given every fourth hour, this alternating with five grains of potassium iodide. Da Costa believes in the use of opium, but had given less than the usual amount in this case, because the patient was easily quieted. He depends a great deal on the iodides. Headache may come from the exudation, and this also causes a tendency to convulsions. This may be greatly influenced by the use of iodides.

Miller, of Illinois, is a strong advocate of ergot and calabar in the early stages and opium throughout. He also emphasizes the value of the iodides. Bleeding is not advisable, even though it is apparently indicated.

Bela Augyan *(Memorabilien)* considers corrosive sublimate injected hypodermically to have a marked effect in relieving the symptoms. He states that after the second or third injection the headache is relieved, the cerebral symptoms are lessened and the mind is clearer; after the eighth or ninth the temperature is lowered and consciousness returns. The effect of this treatment is to lessen the inflammatory process more than to shorten the course of the disease.

The hope of the physician lies in the discovery of a curative serum, as the present medicinal treatment is discouragingly inadequate. No method of producing this has as yet been discovered. Maddox, of Kentucky, reports a case treated by anti-streptococcus serum. Six doses of the serum, of 10 cc. each, were given. A pronounced benefit was obtained from the first dose. The supply was limited, and the serum was given at longer intervals than was really thought best. It was believed that the result would have been much better had the doses been closer together.

THE TREATMENT OF RECURRENT ATTACKS OF SPASMODIC CROUP—WITH REPORTS OF CASES.

By Milton P. Creel, M.D.

Surgeon I. C. Railway; Surgeon L. & N. R. R.; Member National Association Railway Surgeons; Member American Medical Association; Member Mississippi Valley Medical Association, etc., etc.

THERE is no affection of childhood which excites more consternation in the breast of the average mother than to awake in the night and find her infant in the throes of croup.

These cases form a large share of the physician's burdens during the winter months, and the best means at the disposal of the profession for handling these cases should be brought to bear in every instance. The treatment I have thought best to consider under two heads, the treatment of paroxysms of croup, and the institution of such means as will tend to prevent a recurrence of another seizure. The administration of an emetic, one which acts quickly, affords us a safe and satisfactory means of overcoming the paroxysms of croup. Terpeth mineral, alum and honey, ipecacuanha and the other emetics, are all valuable. Often these are slow, however, and the physician is tempted to give an anæsthetic. These

are safe only in those cases where the heart and respiration are not embarrassed. A patient seen before the dyspnœa is very marked, however, may be relieved by having him inhale chloroform to the point of narcosis. The giving of the patient a warm bath has been to me a means of overcoming the paroxysms that has seemed of great value. It tends to relax the patient, and expedite the action of emetics, and sleep and freedom from further attack the remainder of the night generally follows.

To prevent a recurrence of these attacks is a matter of the greatest importance.

A study of these cases, covering a large number of cases, has convinced me that the spasmodic tendency of the larynx is due to existent bronchitis, and when this is removed we shall have no further seizures.

My success in treating these cases, in bringing about a cessation of these nightly visitations of croup, has been secured by treating the accompanying bronchitis.

This treatment consists of the administration of remedies which the case in hand may suggest. I have found that in these cases the patients have a bronchitis attended with copious mucus discharge. When these patients vomit we are often surprised at the secretion of mucus that has gone on.

If these patients are poorly nourished they must have cod liver oil, and even the hypophosphites. When, however, there is no trouble on this score we should not give the remedy.

One agent which has been most beneficial to me has been the balsam of copaiba. This agent has been depended upon by me for a number of years and has not failed to bring me the most satisfactory results. I give it in doses of one to three drops four times daily to a child five years of age. I give it in an emulsion, which is sweetened and flavored and children take it without any reluctance.

This remedy is continued as long as there is any evidence of bronchitis present.

Conjoined with this remedy I have the mother have a vapor-cresolene lamp burn in the bedroom of the patient every night. This vapor is antiseptic and exerts a curative action on the inflamed tubes, and I have come to value it, and make it an essential part of my treatment.

The clothing of these patients should be warm, and the chest and neck must be thoroughly protected.

One point I never fail to emphasize is that these children's feet must be adequately protected; not only during the day must this be looked after, but if there is no fire kept in the bedroom then we must have the feet covered at night. This can be done by pinning the bed clothes, or keeping stockings on through the night.

A great many mothers provide their children with long night gowns which are heavy enough to protect the feet, and are so long that they cannot be kicked off.

L. Y., age two and one-half years, had had recurrent attacks of spasmodic croup for the past two months. Examination revealed an existing bronchitis. This patient took an emulsion of balsam copaiba four times daily, a teaspoonful of which contained one drop of balsam copaiba.

Vapor-cresolene vapor was inhaled every night, and care was taken to have the patient provided with a long, warm night gown to protect the child's feet.

On this treatment the patient got along well and after the second week had no further attacks of croup.

This was a well nourished child, and took no cod liver oil.

Beatrice I., age two, had attacks of croup that were very distressing to her mother, and had had an attack almost every night for a month.

She was given the copaiba, and slept in a room where the vapor-cresolene prevaded the atmosphere.

On this treatment she got along well, and was discharged cured in eighteen days, and had no more attacks during last winter.

Willie, age four, had had attacks of croup for the past two years. Examination revealed bronchitis.

On the treatment given in the above case this patient made a complete recovery in six weeks.

This patient was not well nourished, however, and I had him take cod liver oil for five or six weeks.

These cases are briefly told, but I have striven to give results rather than unimportant, or commonplace detail.

A CASE OF TETANUS TREATED BY INTRA-CRANIAL INJECTIONS OF ANTITOXIN SERUM.

By H. S. Cooley, M.D., Newburg, N. Y.

UNFORTUNATELY I cannot report successful results from the treatment of tetanus with antitetanic serum, but it is to be hoped that a mutual benefit may be derived after a careful consideration of the case. One point is pre-eminent, and that is that the number of antitoxin units were inadequate to counteract the toxine.

This young man was about twenty-five years of age, born in Newburg, weighed about 125 lbs., and was employed in a carpet mill.

He was usually employed in the picking room, but on June 27, owing to the absence of one of the carders, he was detailed to a carding machine. This is a machine with large rapidly revolving rollers, which are covered with wires 3 or 4 inches long, set on like the bristles on a hair brush, and used to comb out the ropes composed of cattle hair, wool, and oil. While thus engaged he lost his equilibrium, and in trying to save himself from falling he thrust his right arm into the machine, which was in motion, tearing all the flexor muscles from the anterior surface of the forearm and severely scratching his wrist and finger tips. The periosteum was ground from the upper third of the ulna and the ulna artery was bared in its middle third. The loss of blood was considerable, but the boy displayed a great deal of pluck, wrapped the mangled shreds over the wound and walked some distance to his home.

In dressing the wound it was necessary to remove a great deal of lacerated tissue and to tie several vessels. All pockets were explored and the wound repeatedly irrigated with antiseptic solutions. Iodoform gauze drainage was freely used, and the edges approximated and sutured to within about

2 inches of the elbow, it being impossible to unite the edges over the Olecranon process. The wound was then dressed with iodoform gauze and aseptic dressings and the arm placed upon a splint. The patient was confined to his bed, and the healing progressed favorably. Six hours after the injury his pulse was 62 and his temperature 99.9° F.

The evening of the following day his pulse was 94 and his temperature 101.6° F. The pulse and temperature gradually decreased until July 10, when they were normal.

Wednesday, July 12, fifteen days after the injury, he complained of stiffness in the muscles of the back of the neck. The weather was typical for the development of tetanus. Nothing was thought of this, since he was a good grumbler. Thursday, July 13, he complained of an ache in his upper jaw. Tetanus was brought to my mind, since every paper contained accounts of it. I examined his mouth and found a decayed tooth upon each side of the upper jaw. His mother said he had been in a draft during the night, on account of the sudden change in the weather.

I advised the application of a hot-water bottle, which temporarily relieved the pain, and waited to see his condition on the next day.

Friday morning he was worse, the muscles being more rigid than on Thursday. The wound was irrigated, and the dressings changed every other day from the receipt of the injury. From now on the wound was more frequently irrigated and the dressings kept wet with a 1 to 500 bi-chloride of mercury solution, which was afterwards changed to a weaker solution.

About 2 P. M. 3 c. c. of Pasteur's anti-tetanic serum was injected hypodermically in the shoulder above the injury. Intracerebral injection was advised but refused. At 3 P. M. the auxiliary temperature was 99° F., pulse 77, and respiration 18. At 3:30 P. M. 30 grains of chloral hydrate was given. Milk, whiskey, and liquid peptonoids were given at intervals. No urine having been passed during the day, at 6 P. M. a metal catheter was passed and 14 ounces withdrawn. A decided improvement followed the serum injection, the muscles relaxed, and he was able to separate his jaws completely. He slept for a short time, and during the sleep broke out in a cold sweat.

At 8 P. M. an enema composed of 2 ounces olive oil and 2 pints of warm soap-suds was given, and the abdomen was massaged; this was followed by the evacuation of a large quantity of fæcal matter.

At 9 P. M. 2½ c. c. of serum was injected into the shoulder above the wound. There was pain in the jaws, with slight trouble in swallowing during the night. About 4:30 Saturday morning the hands and mouth began to twitch. At 5 A. M. 40 grains of chloral was given and the twitching ceased fifteen minutes later. At 6 A. M. the pulse was 77, temperature 98°, and respiration 18. During the night the pulse was intermittent. He awoke only when spoken to during the night. At 7:30 A. M. the pulse began to lose tone, and at 8 A. M. was again intermittent. The patient was catheterized every six hours. At 10 A. M. the wound was dressed and 2½ c. c. of serum was injected into the shoulder. These injections were made in the shoulder above the wound, so that the serum might come in contact with and neutralize the toxine before the toxine reached the centers. At 10:30 A. M. 30 grains of chloral was given. He then slept an hour and awoke very talkative. At 1 P. M. his pulse was 120, temperature 99.2°, respiration 22. He slept three hours, and upon awakening sat up in bed ten minutes to relieve the pain due to muscular contractions; pulse had fallen to 109. He slept again for a short time. At 9 P. M. his pulse was 84 and slightly irregular; temperature, 99°. He again became very restless. While sleeping the knees were flexed and the legs crossed. During the night he complained of intense pain in the neck, which shot down the back. About 11 P. M. 2½ c. c. of serum was injected into the shoulder, and at 11:30 P. M. ¼ grain of morphine and 1-150 grain of atropine was administered hypodermically.

He passed a very quiet night, had no twitching nor spasms, and slept well. At 3 A. M. Sunday he had a severe attack of choking, caused by mucus in the throat. At 6:30 A. M. he had a severe spasm and flushed face. His head and hands became covered with a cold sweat and his pulse was weak and small. At 7:30 A. M. he had clonic spasms of the entire body, necessitating the administration of chloroform. At 8 A. M. he sat up while the bed was re-arranged. During the twenty-four hours ending Sunday at 10 A. M. he slept twelve hours, took 70 grains chloral, ¼ grain morphine, 22 ounces of milk, and passed 22 ounces of urine. He slept for one and one-quarter hours. Dr. Howell was called in consultation; intracerebral injection was advised as a last resort, and consent given by the boy's parents. About 12 M. the patient was prepared for operation. Dr. Howell removed a button of bone from the left parietal bone, the dura mater was incised, and 3 c. c. of antitoxine was injected into the left parietal lobe of the brain. The dura mater was then stitched, drainage inserted, and the scalp sutured. The operation lasted an hour. The patient withstood the operation fairly well; ¼ grain morphine was given afterwards. At 3 P. M. the pulse rose to 120 and remained so for several hours. At 4:30 P. M. there were spasms of the throat and mouth; at 6 P. M. he slept for half an hour, with knees flexed part of the time. Following this there was sharp pain in the back of the neck, with another sleep of fifteen minutes' duration, and much twitching of back and legs. At 9 P. M. the patient became quite restless and the spasms were quite severe; ¼ grain of morphine was given, followed by one-half hour sleep. At 10 P. M. the temperature was 100.8° F.; pulse, 102. He slept at intervals during the night. Pulse was intermittent, and he complained of pain in the head. Liquid peptonoids, milk, and soda water were given at intervals during the night. At 2:30 Monday morning the patient grew suddenly restless, and complained of great pain in jaws, throat, chest and head. At 3 A. M. ¼ grain of morphine and 1-150 grain atropine was injected; at 3:30 A. M. inhalations of chloroform were administered. The pulse was 114, and respiration 24; 4 A. M. temperature 101° F., pulse 120, respiration 24, and profuse sweating; 5 A. M. he was resting quietly. At 6:30 A. M. he complained

of feeling rigid all over and continually asked for chloroform; 19 ounces of fluid were taken during the night. The patient voided urine at 9 P. M. and 7:30 A. M. There was continuous oozing from the scalp wound since the operation. At 8:40 A. M. ¼ grain of morphine was given. The patient was very restless, throwing himself about the bed. The contractions were severe, pulse regular and breathing deep and regular. At 10:30 A. M. the patient was resting and sleeping ten minutes at a time, being awakened by short spasms which produced oposthotonos. The fingers became stiff and the head was turned towards the left side for a short time. He then slept from 11 to 11:30 A. M.; temperature 102.4°, pulse 112, respiration 20. At 12 M. the pulse was 130 and respiration 22, and of Cheyne Stokes variety; ½ ounce of whiskey was given. At 12:30 P. M. his temperature was 103.8° pulse 150. Inhalations of chloroform were given at intervals during the afternoon. At 2 P. M. 30 grains of chloral was given; at 3 P. M. temperature was 103°, pulse 140, respiration 24; urine was voided. Pulse was weak but regular, respiration was regular and deep; he slept one hour; slight respiration while sleeping, mind wandered, and slept again for half an hour. At 5 P. M. pulse was 148; ¼ grain of morphine given. Had no muscular twitching during the afternoon. At 6 P. M. the temperature was 103°, pulse 166 and respiration 24; they increased in frequency during the night. During past twelve hours the amount of urine voided was 7 ounces, of milk taken was 12 ounces, of liquid peptonoids 6 drachms, of chloral 30 grains and of morphine ½ grain. At 8 P. M. his jaws became set, his breathing rapid and shallow, and pulse very rapid. The chloroform inhalations were repeated every ten or fifteen minutes during the night. At 10:20 P. M. the pulse was 198, respiration 30, and breathing stertorous. At 12 midnight the patient was failing rapidly and chloroform was administered continually. At 1 A. M. Tuesday the pulse had a fair volume; at 2:30 A. M. the patient was under influence of chloroform; about 4:30 A. M. the breathing became of the Cheyne Stokes variety, the extremities were cold and cyanosed, breathing very labored; his strength gradually left him, and he died quietly at 6:30 A. M.

The Best Air Temperature.—The conditions affecting the temperature of the body other than those due to physiological conditions are very numerous. First and most obvious is the temperature of the surrounding atmosphere. It is a well-established fast that an average temperature of the air of 54 degrees Fahrenheit is best adapted to the public health, for at that temperature the decomposition of animal and vegetable matter is slight and normal temperature is most easily maintained. Every degree of temperature above or below that point requires a more or less effort of the heat-regulating power to maintain the proper equilibrium. Even more potent in elevating the bodily temperature is the introduction into the blood, whether by respiration or by direct injection, or putrid fluids and the gases of decomposing matters. If this injection is repeated at short intervals, death will occur with a high temperature.

The air of cities contains emanations in hot weather from a vast number of sources of animal and vegetable decomposition, and the inhalation of air so vitiated brings in contact with the blood these deleterious products in a highly divided state, which cause a fatal elevation of temperature in the young, old and enfeebled.—*Science Monthly.*

CHRISTIAN SCIENCE.

Oh, "God is so good,"
If we we sit down and brood
On the goodness and "Allness," within and without us,
We need have no fear,
Our crackers and beer
Will flow from the "Allness" and goodness about us.

Of course, "there's no evil"—
God's not so uncivil
To make us imperfect and send us to thunder.
"There's nothing but love"—
In the heavens above,
The pockets of men, and the hearts that beat under.

"There can be no trouble"—
The body's a bubble—
It's all a "mistaken belief" and a dreaming.
God made us to fool us,
'Till some one should school us
To see what we see to be only a seeming.

"We're nothing but spirit"—
We really don't hear it,
Or see it, or taste it, or smell it, or feel it.
"There is no sensation"—
Except the temptation
To think what we think, when we think we can't heal it.

'Tis quite a mistaken
Idea we have taken,
That there's but one method of race propagation.
A child now to bother
About who's his father
Shows stubborn contempt for the new revelation.

"There's nothing but mind"—
Though created so blind,
We're all of us nursing some little "delusion";
But friends by the score
(For a dollar or more),
Will kindly remove the distressing "illusion."

With best of intention,
The Lord failed to mention—
While healing the halt and the deaf and the blind—
The trick of his healing
Was simply revealing
A "mortal deception" of "immortal mind."

And that these signs and wonders
Arose from the blunders
The Father had made in creating mankind;
And, until he was ready
To send Mrs. Eddy,
The world must remain to his purpose blind.

The Bicycle in Cases of Hernia.—Championniere reported to the French Academy of Medicine (*Le Progres Med.*, Feb. 4, 1899) that bicycling was an excellent exercise for patients affected with hernia. It permitted of an inprovement in the strength of the muscle walls of the abdomen and a gain in the general health, due to the advantage of exercise in the open air, without the inconvenience attending muscular exercise in the vertical position, which is often difficult for the subjects of hernia. Championniere has all of his patients who are operated upon for a radical cure of hernia resort early to the bicycle.

Resuscitation in Apparent Death During Chloroform Narcosis.—Herzog (*D. Zeitsch. f. Chir.* Jan., 1899) believes that in apparent death from chloroform narcosis as a result of stoppage of the heart, the insufflation of air into the lungs should not be practiced, but that the latter procedure is very useful when the suspension of animation is due to stoppage of respiration. Insufflation is equally efficacious whether performed by catheterizing the larynx or tracheotomy. The former procedure is to be preferred on the following grounds: It can be carried out more rapidly and with less technical difficulty; no wound is made. Tracheotomy may still be performed later, and finally the respiratory center is excited.

The Medical Times

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EDITORS:

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Thought is force, and the thought which is the result of the higher perceptions dominates that produced by the lower.

AMERICAN MEDICAL ASSOCIATION.

TO the logical mind this association is sailing under false colors, and the name is a misnomer. It is not the American Medical Association, and has no right to the name. An American medical association would admit to fellowship all regularly educated physicians of reputable standing in the community, the profession thus forming a national society of cultured medical men. The so-called American Medical Association is thoroughly partisan, refusing to admit to its fellowship all those who will not subscribe to an iron-bound code and a partisan creed. This excludes some of the most advanced men in the profession, the clearest thinkers and the most successful practitioners in medicine and surgery.

The editor of the *American Gynæcological and Obstetrical Journal* says: "This society is not, and can never be, truly representative while it excludes from its membership the physicians and surgeons of New York State whose contributions to our science have made them throughout the world the glory and honor of American medicine. It is surely an anomalous and absurd position when members of the association willingly meet these New York men in consultation and in other societies on terms of honor and absolute ethical equality, and yet exclude them from the association itself on the ground that they are *not* ethical. It seems strange to-day, when so many of the men are dead who in the passing generation fought the old fight about the code with so much personal rancor, that the association, to the majority, perhaps, of whose members the 'old code and no code' shibboleth is now hardly a tradition, should not see the wisdom and the importance of an effort to bring back within its fold those former members and their professional descendants whose influence and reputation are second to no other in the country. We fail to find any other results of the fight which the association forced so many years ago except that its effect against Homœopathy has been absolutely inocuous; that it has driven out and kept out a very large proportion of the most prominent men in this country, who are honored members of all other societies here and abroad, and that the association from this cause has crippled itself, and instead of being truly *the* American association, with the power and authority to represent and to guide the policy of the whole profession, it is merely a very big society, recognized only by its large but limited membership."

The Homœopathic and Eclectic societies, as originally formed, were not intended as general medical societies, but simply to study with more care than they otherwise could the respective specialties in therapeutics. In this department no intelligent person can deny that their work has been markedly successful. Some of the most potent remedies in the materia medica, forming an important part of the repertory of every physician, were brought to the attention of the general profession by the so-called irregulars. To the Homœopath in particular is due the credit of throwing off, to a certain extent, the trammels of empiricism in studying the action of remedial agents along those strictly scientific lines now recognized and adopted by the leaders of medical progress throughout the world. Great credit is also due to the excellent work of the Eclectics in their studies of plants, and in isolating from the crude drug the fluid extracts, the resinoids and alkaloids which now enter so largely in the repertory of the physician. The tablets now made by the million, and used more or less by the entire profession, have pioneered the way, in the so-called old school, to that careful individualization of cases, and adapting the remedy in the strength and frequency best suited for its curative action. Whatever may be thought of the so-called law of *similia*, it is very evident that the lines marked out for the study of drugs, and to a certain extent their application, by Hahnemann, are now adopted by the great majority of the medical profession. The name is of but little importance so long as the correctness of the principle is established by scientific data.

In this connection we cannot refrain from hint-

ing that even a slight familiarity with the teachings of Hahnemann brings out in clear light the very principles which have immortalized the names of Pasteur and Lister, the recognition and study of which contributed so much to the success of his followers. The attempt of a past generation to crush out what was considered by the general profession as medical heresy is ending in the adoption of the very principles denounced as heretical by those who claimed to be thoroughly orthodox. In theology as well as in medicine the term orthodox is an expansive one, and with that clearer insight of truth elicited by scientific and thoughtful investigation, includes within its fold to-day what it denounced yesterday not only with Pharisaic pride, but bitter hate and relentless persecution.

We quite agree with the editor of the *Gynæcological and Obstetric Journal* that the time is past for the continuing of a conflict which, based in a great measure upon personal feeling, egotism and self-will, instead of a real love for truth, should never have existed. It is freely admitted by those in the old school who have given the matter sufficient consideration to get at the real facts that the bitter opposition toward Homœopathy was unwise, unprofessional and illogical. Instead of permitting the free investigation within its own ranks of every medical principle, the boycott was relentlessly applied, and honest, earnest men of high professional standing and ripe intellectual culture and experience were forced from the ranks, not for adopting an exclusive law, for that they never claimed, but for investigating and utilizing to a certain extent a new principle in therapeutics and the study of remedial agents. Against all this class the gates of professional courtesy were closed and barred until a host of the foremost men in the profession, acknowledged leaders of thought, broke away from an obnoxious tyranny so senseless that it was becoming the laughing stock of the public, opening wide the doors to free thought and independent action. For these men the code of partisanship has no terrors; they claim to be quite able to choose their own associates from men who have learned in schools recognized as legal by the educational authority of the State.

The definition of "What is a Homœopath?" has recently been given—and adopted, if we are not mistaken, by the American Institute of Homœopathy—as one who adds to a thorough knowledge of Homœopathy that of every other medical principle in the profession. In other words, the Homœopath includes within his studies the whole range of medical science, and eagerly seizes hold of any thought, of any experience, no matter what the source, which can be utilized for good in the work of his profession. We are strongly impressed that the more correct name for such a man is *physician*, and that the term Homœopath is, to a certain extent, in his case a misnomer, and does not fairly represent his real position among thoughtful men in the medical world. The term might be perfectly correct as designating a principle, a specialty in therapeutics, but is it correct as applied to a college, a hospital, where at the present day it may occupy a leading but by no means an exclusive position?

The feeling which led to the breaking away from the bondage of the so-called "American Medical Association" showed an honest desire for a full recognition of scientific truth and a careful investigation of every great line of medical research. We are confident that nine-tenths—we might almost say ninety-nine one-hundredths—of the leading minds in the profession would to-day define a *physician* as one who seeks to grasp the whole, culling from the wide range of medical and general scientific thought what he can best utilize in his life work. One is more partial to the use of water, another to electricity, while another studies with more care the dual action of drugs. This careful study of what may be called therapeutic specialties, while none is looked upon as exclusive, naturally leads to a greater unfolding of the laws of nature and a clearer insight into the cause of disease and the specific action of remedial agents. "No pent up creed confines their powers, but the whole boundless universe is theirs."

It is very manifest that in every line of thought a misunderstanding of terms leads to the strongest partisanship and the most bitter antagonism. We are understanding now better the refinements of language, the various meanings which different minds attach to expressions, and are less hasty in our conclusions, being quite ready, in most cases, to measure them as far as possible by the tests of science. It is a question well worthy of consideration, and which appeals directly and with great force to every honest, intelligent mind, if more could not be accomplished and infinitely better results obtained in the union of all schools in one great national society, catholic in its character, limitless in its search for truth, and recognizing the utmost freedom of thought. A solution of this vital question has already been proposed by Surgeon-General Sternberg, in his inaugural address recently before the American Medical Association, to which the TIMES called attention, in the formation of a national society to be called the "American Institute of Scientific Medicine." This society would in no sense of the word be

partisan, but would represent the entire profession. The facts revealed in our war with Spain, the vast increase of territory, and the activity of our profession in those scientific researches looking to the prevention and cure of disease, will render, at no distant day, an addition to the Executive Cabinet of the Government of a new chair, to be filled by a *Medical Director General*, an absolute necessity. The formation of such a national society as is suggested by Gen. Sternberg would be most timely at this period, and would be not only of great professional but national importance, and worthy of the position our country occupies among the nations of the world.

PROF. SARANELLI AS A BACTEROLOGIST.

THE attention of the public has been directed with renewed interest to the experiments of Prof. Saranelli in isolating the icteroides bacilli of yellow fever, since their truth has been confirmed by the laboratory investigations of Drs. Wesden and Geddings of the Marine Hospital Service. Dr. Saranelli is still a young man, having graduated in medicine and surgery in 1889, and at twenty-nine years of age received the appointment of Professor of Hygiene in the University of Sienna. Dr. Saranelli's studies upon the etiology and pathogenesis of typhoid fever, cholera morbus and Asiatic cholera commenced in 1892, and continued in the Pasteur Institute of Paris for three years, and were published in three successive monographs. The conclusions reached and the work performed gave the author a high standing as a bacterologist in the scientific world before he commenced his studies on yellow fever. Every physician has found in practice many of the leading symptoms, described by medical authors as diagnostic in typhoid, entirely absent or only present to a slight extent. It was supposed that typhoid virus had its seat in the intestines and that it thus elaborated its specific poison. Dr. Saranelli says:

"I have succeeded in proving that such pathogenic conception is decidedly wrong; typhoid is not an intestinal infection, but rather a general infection, localized principally in the lymphatic system, where the specific bacilli preferably establish themselves and where they compound their poison. This poison was isolated and studied the first time by me. I found it possessed toxical action upon all the mucous membranes, and especially upon the intestinal membranes. It is sufficient that this poison circulates in order to produce a deleterious influence upon the intestinal membrane and cause enteritis. This enteritis, characteristic of typhoid fever, is not therefore due to the presence of typhoid germs in the intestines, but is caused by toxine, which acts upon the intestinal mucus, circulating in the blood and lymph. The intestinal lesions of typhoid fever manifest a physiological mechanism analagous to that of certain poisons of serpents, the bites of which produce conditions at times of a most serious nature."

Believing that the etiology of yellow fever should be sought for along the same lines as those of typhoid fever, and that the pathogenetic mechanism of both was identical, Dr. Saranelli sought for the specific germ, not in the black vomit or in the digestive canal, but in the blood, and claims to have found it. Thus, the germ being found, it remains to find a germ destroyer, perhaps a serum toxine, more efficient in its action than quinine upon the plasmodia of malaria. Of one thing it is certain: That the lines of investigation now being pursued are elevating our profession into a science, forming a bond of union in which all can unite.

THE VICTORIA CROSS.

THERE is no distinction so much coveted in the British army and navy as the "Victoria Cross, instituted in 1850 as a reward for conspicuous valor in the presence of the enemy." This distinction is so seldom given that in 1898 there were but 171 names of men on the rolls of the Order, and those include not only officers in the army and navy, but enlisted men. The Cross is a prize for which all can contend. Twelve of those who have the Cross are medical officers, or more than one in ten of the total number of officers.

A writer in *Munsey's*, for September, states why it was bestowed upon one medical officer. Dr. Whitechurch was surgeon with Robertson's gallant corps in Chitral in 1895. In a reconnoisance he and Dr. Baird were defeated by a greatly superior force. Baird was shot through the body. Whitechurch put him on a litter and rallied the men to work their way back to the fort. From time to time the litter was set down and all hands halted to beat back the enemy. Finally the four litter bearers were killed. Then Whitechurch drew Baird's right arm over his own shoulder, put his left arm around his waist, and so dragged and carried him back through a steady fire to the fort. Baird was again shot in the face, but Whitechurch passed through the fire unharmed. For this act of heroism Dr. Whitechurch received the Victoria Cross.

But there is no Victoria Cross for the thousands of still braver deeds which are shown, not perhaps

on the battlefield, but in the quiet of everyday life, with no one to applaud and with no reward except the consciousness of duty well performed. Cowardice is incompatible with high principles. When something more than animal courage is required the nobler qualities of the nature dominate over the purely selfish, and the highest illustrations of pure courage are seen in almost every walk in life.

THE NEW MEDICAL CURRICULUM AT HARVARD.

AS most of our readers are probably aware, a change somewhat radical in character has recently been proposed in the curriculum of the Harvard Medical School. The essential features of the new plan, as presented in the *Boston Medical and Surgical Journal*, as are follows: The first half of the first year has hitherto embraced the study of anatomy, physiology, physiological chemistry, and histology, on a scheme of lectures and laboratory hours much like that pursued in the college proper. By the new plan all the mornings of October, November and December, and the mornings and afternoons of January, will be devoted to anatomy, the allied branches of which, histology and embryology, will be taken up in the afternoons of the first three months. During the second half-year, which until now included anatomy, physiology, physiological chemistry, bacteriology and embryology, the student will hereafter study physiology for the mornings of February, March, April, and all day in May, with physiological chemistry on the afternoons up to the 1st of May.

The changes in the second year's work are of even more importance. Full courses in pathology, clinical chemistry, second year anatomy, and therapeutics, together with half-courses (without examination) in ausculation and percussion, theory and practice, clinical medicine, bandaging, and surgical pathology, have heretofore comprised the second year's course. In place of these, the first half-year's work will be on pathology during the mornings of October and November, and all day in December. For the afternoons in October and November there will be a course in bacteriology. The work for January will comprise a number of optional courses in pathology. During the last half of this second year the student will study a number of elementary subjects introductory to the clinical work of the third and fourth years. These subjects are ausculation, clinical chemistry, theory and practice, therapeutics, surgical pathology, bandaging and clinical medicine. They will occupy twenty-six hours and a half a week.

In this way the student will have studied both gross and microscopic anatomy before he undertakes physiology, and will have completed his work in anatomy before he undertakes pathological anatomy or pathology. He will, for example, know the principles of structure of the nervous system before he is called upon to study its functions.

Of course, it was not to be expected that such a deviation from long established methods of professional training should escape criticism. Indeed, as our contemporary observes, "a candid criticism, and the expression of other points of view, must be welcomed." Such an estimate, as he regards it, has appeared in the *British Medical Journal* of July 22. Says this writer, after quoting the foregoing outline: "While we have no wish to prejudge the subject, it seems to us impossible to believe that anatomy and physiology can each be learnt in four months. The mere dissection of the body would, we should have thought, be impossible in the time, and anatomy cannot be learnt—at least as we learn it here—without much reading, nor remembered without repeated observation. We cannot but wonder how much anatomy the student, who has not thought of it in a year and a half previously, will command when he goes into the wards. We have often urged that for the proper study of anatomy and physiology it is desirable that nothing else should be studied for the first year and a half, and here is a proposal that the whole of these vast subjects should be finished in two periods of four months each. There will be no means of testing or comparing the results, for the examinations must of necessity adapt themselves to the new level, and the abiding knowledge to be employed in practice, which is the thing of real importance, can hardly be tested at all." Upon the whole, therefore, the new departure is regarded by this authority as a somewhat retrograde movement.

Commenting on the above, the Boston editor admits that anatomy and physiology cannot be learned in four months, or, indeed, in as many years. On the other hand, he contends that "the essential rudiments of these sciences may be better taught and learned in four months of concentrated effort, than in a year or more of unconcentrated study. . . . With the enormous growth of detail which the last few years have witnessed, it is evident that the elementary student should only be called upon to master principles. . . . If proper methods of study are inculcated the facts will take care of themselves.

"The error of all such arguments consists," he thinks, "in the failure to appreciate that the essence of preliminary medical education lies in its capacity to train the mind to future accomplishment, rather than to make it merely a storehouse of facts. . .

"It is probable that the new plan of concentration and gradation will bring this end to pass. . . . If the scheme ultimately fails, we are confident it will not be for the reasons adduced by the *British Medical Journal.*"

It strikes us that this is not a very hearty or hopeful strain of commendation, and that the Englishman's objections are evaded rather than disposed of. We cannot help sharing his apprehension that the passing of anything like a strict examination in anatomy, after only four months' study, however "concentrated," must needs involve a lamentable amount of hasty cramming, and consequent improper assimilation. But no doubt the contemplated system will have a fair trial, and be decided upon according to its merits. The course of medical study being now so greatly lengthened, it certainly seems unreasonable that the curriculum which suited well enough when a batch of doctors was turned out every two years should not be considerably modified.

THE NEW DISPENSARY LAW.

TWO of the worst abuses connected with dispensaries is the practice of well-to-do persons patronizing them to escape employing a physician at their own expense, and the establishment of dispensaries in drug stores, by which poor persons are often outrageously fleeced. The real object of dispensaries is thus entirely perverted. The class of persons for whose benefit they are intended is the class which, in many instances, receives the least benefit from them, and the result is that many poor persons go without medical service rather than visit one of these places. The amended dispensary law, which takes effect on October 1, promises to cure these abuses. It prohibits dispensaries in drug stores, restricts to a very small sum the amount which may be charged for medicines, and imposes a heavy penalty on persons who seek free service when they are able to pay for it. The law is a compromise measure that was passed by the Legislature last winter, and it is designed especially to root out dispensary abuses in this city.

THE CODE IN NEW YORK.

PROFESSOR A. M. PHELPS, of this city, was recently written to by one of his pupils residing in another State, in respect to the "Code of Ethics of the New York State Medical Society," and the following is Dr. Phelps' reply:

"Your letter of August 22 is received. In answer I will say that the only code of the New York State Medical Society is that of the army and navy: 'That discipline is only applied for conduct unbecoming a gentleman.' Ethics never made gentlemen; but gentlemen do make ethics, and one of the reasons why the medical profession is growing more gentlemanly is because the laws of the several States have placed a certain standard for admission to the study of medicine. That standard is so high in several States that the loafer or the blackguard is excluded, because he never had the personality requisite for higher education, which is one of the qualifications for admission to the study of medicine.

"The New York State Society cares not what a man practices or what he believes. It is a question of what the man is, and what he does. This, it seems to me, covers this entire question, over which there has been so much bad blood.

"It is a question with us of morals, and morals always govern principles. If morals are bad, principles will be bad, code or no code. You cannot get blood out of a turnip, neither can you get gentlemanly or honorable conduct out of a dishonorable loafer, whether he is in the medical profession or in the pulpit. This is our code!"

PHOTOGRAPHING THE STOMACH.

ABOUT seven years ago Dr. Max Einhorn, of this city, published an article in a medical journal detailing a device he had invented for making the stomach translucent, so that its condition could in some degree be detected through the outer walls. The device consisted in introducing into the stomach an Edison lamp in a special mounting, attached to a soft rubber tube containing a wire. The device has proved of but little practical use, but recently an improvement has been made by Dr. Fritz Lang, of Munich, Germany, by which the inside of the stomach can be clearly photographed, so that it will give a very accurate means of diagnosing a class of diseases which has heretofore been attended, in some cases, with great difficulty.

The camera is constructed on exactly the same principles as all cameras for taking moving photographs, although, of course, there is no attempt made to combine them so as to project the actual operations of the stomach. It is doubtful, however, if a camera has ever before been fashioned which is as compact as this one, or which has been put to as strange a use.

This camera is actually swallowed by the patient, and no sooner does it reach his stomach than the walls thereof are illuminated by a small electric lamp attached to the apparatus. At the bottom of the camera is wound a photographic film twenty inches long and a quarter of an inch wide, and one end of this film is fastened to the cord, which runs freely in the tube. Of course the cord and the conducting wires must be swallowed with the camera

itself, for, in order to draw the film past the lens the cord must be pulled.

As soon as the camera reaches the bottom of the stomach, the work of photographing may begin. All the surgeon has to do is to pull the cord and thus run the film past the lens. The electric light is then turned on and after the sensitive film has been impressed with the image the current is turned off and another section of the film is brought into play until the requisite number of pictures have been obtained. When this is done the entire apparatus is withdrawn from the stomach, and the films are carefully developed and enlarged.

A TARDY TRIBUTE.

IN the president's address at the recent meeting of the British Medical Association, justice was at length rendered by our transatlantic brethren to the man who first practically and publicly solved the problem of surgical anæsthesia. Hitherto they have either sought to credit Sir James Simpson with the discovery, or have confounded the claims of "the Boston dentist" with those of his unsuccessful rivals. Even on the occasion referred to, the value of the orator's acknowledgment was lessened by his coupling Morton's name with that of J. Collins Warren—at best but a secondary and half-hearted participant in the glorious achievement. The personal character of the former, it must be allowed, was hardly such as to command that warm and spontaneous gratitude with which posterity has rewarded the disinterested philanthropy of Edward Jenner. Some alloy of sordid self-seeking may have mingled in his case with the lofty attributes of a universal benefactor. Yet, after all, it was, as Dr. Cousins said, "genius and courage" which carried Morton to the front, and these are the essential qualities of a hero.

THE HOSPITALS AND DISPENSARIES OF NEW YORK.

THE Comptroller of the city is a member, by virtue of his office, of the Board of Estimates and Appropriations, and to enable him to act understandingly in the matter of appropriations he has familiarized himself by personal investigation as to how the money is expended, and as regards medical charity, a just distribution of funds. He thinks a million of dollars could be saved to the city, with a better service than it now maintains. He finds that the city is paying twice over for the care of certain indigent persons, and while it is maintaining great institutions for their accommodation, it is recompensing private hospitals for caring for them. The Comptroller speaks in high terms of the untiring energy, the excellent judgment and efficient work of Hon. John W. Keller, Commissioner of Charities, under whose guidance he visited all the hospitals in the department, and says the Commissioner has performed wonders in the way of improvement. The Comptroller says, in concluding that part of his report relating to charity:

"I believe the city should own its charities, and that facilities should be increased for making them more effective. In a short time it will have accommodations for many more than it can take care of now. It has been practically paying double by supporting institutions not used, and paying for the care of patients who should use them, in private institutions.

"There are the maternity wards in the Metropolitan Hospital on Blackwell's Island. There are only fifteen cases there, though a very large number could be received. The reason for this is the idea that it is more 'respectable' to go to the Sloan Maternity or some other private institution to which the city makes an allowance, and where nobody outside knows whether the patient pays.

"I have visited many private hospitals, and none can compare with the Metropolitan in point of discipline, order and cleanliness. Dr. George T. Stewart has charge of the institution, and no man works harder for the city or does better work than he, and yet he gets only $2,000 a year. Scores of men who do not deserve as much are getting more."

MATTEAWAN STATE HOSPITAL.

THE thirty-ninth annual report by Dr. Allison, the superintendent of the State Hospital for the Criminal Insane, gives the number of patients in the institution, September, 1898, as 686, of which 638 are males and 48 females. The number of recoveries in the total number of patients treated was 2.48 per cent., and the cost of support per capita was three dollars and twenty-six cents per week. The number of deaths during the year was twenty-six, or 3.39 per cent. upon the number treated, a very low mortality, showing great efficiency on the part of the management of the institution. The nativity of the inmates is not included in the report.

Dr. Diomedo Carito, professor in the University of Naples, and member of the Superior Committee on Hygiene of the Italian government, has been spending the last two months in this country, under official appointment, to investigate the methods employed in the various hygienic institutions here. The results of this investigation have been highly appreciated by the foreign scientist.

One of the most interesting of all Dr. Carito's investigations was, he declares, when, in company with Dr. Tosti, Italian Vice Consul in this city, the Matteawan State Hospital was visited, at the invitation of its superintendent, Dr. Allison. Dr. Carito

was so deeply impressed with the work and methods of this institution that he decided to make it a subject of a separate and very full report to be submitted to the Italian government, there being no such institution in Italy. A fact that especially impressed him was the transformation by intelligent training of dangerous criminals into men who enjoy work and even attain marked artistic development.

This institution is in striking contrast to conditions on the Continent. There those who have committed crime under the impulse of insanity, as well as criminals who have become insane after conviction, are sent to the regular insane asylums, where they are apt to become a very disturbing element.

BUBONIC PLAGUE.

IN the September issue of this journal, in speaking of the bubonic plague, we referred to the fact that among the natives inhabiting the shores of the water courses and the dense forests on their banks in some of the central localities of the South American continent, there is a disease closely resembling the bubonic plague, which they say they cure with *crotalus*. Dr. Le Plongeon, the celebrated explorer of Central and South America, who has been among these people and has noted the disease and the treatment, writes us that the plague which recently appeared at Assuncion, the capital of Paraguay, on the Paraguay River, 650 miles north of Buenos Ayres, inasmuch as there are no traces of it at the latter place or at Montevideo, could not have entered from an Atlantic port, but was probably imported to Assuncion by natives coming from the rivers of Bolivia, and is of the same character as that which he has seen in those localities, and thinks if it is not the plague of India it is its first cousin, and is developed from the same causes.

THE Ninteenth International Medical Congress, to be held in Paris in 1900, will be the largest, and in all respects the most important of any medical congress ever held. The work of the Congress will be strictly scientific, and will consist of doctors of medicine who apply for admission and men of science who shall be introduced by national committees.

The *British Medical Journal* publishes an extract from a letter received by a correspondent from his brother, a medical missionary in Sechuan, one of the inland provinces of China. "I had," he writes, "a very distinguished patient this afternoon. She is the wife of Sai-Tai of Tien-Tsin, in Chih-Li Province, a man who governs an area probably equal to half a dozen English counties. She brought her fee with her: a fowl, a duck, sixty eggs, two pounds of cakes and a leg of mutton! Last time she came she brought not quite so much, but since then she has sent over eight stocks of beautiful chrysanthemums."

BIBLIOGRAPHICAL.

LE OPERAZIONI PIU FREQUENTI NELLA CHIRURGIA DI CUERRA. Ricordi di anatomia applicata e di technica operativa del Ten. col. P. Imbriaco, incariacato dell'insegnamento di chirurgia di guerra alla scuola d'applicazione di sanità militare. Con 162 figure intercalate nel testo. 472 pp. Florence, 1898.

This is a work on the most common operations of military surgery, by a military surgeon of the Italian army, and arranged in the form of lectures, of which there are thirty-two. Divided into three parts, the first treats of operations on the soft parts, as ligation of the blood-vessels, plastic surgery, etc. The second presents the operative measures most frequently required on the bones and articulations, as amputations, disarticulations, resections, treatment of a wound with involvement of the bones, etc. The latter portion deals with special operations, as those about and on the eye, the respiratory passages, thoracic cavity, laparotomy, and operative measures on the intestines, with their different modifications. A lecture is devoted to the treatment of hernia by operative means; another to the bladder and the necessary interference about and in that organ. All the lectures are entertainingly written and well illustrated with wood cuts, which, though clear, are not as artistic as those of American works. The chapters on the search for and removal of foreign bodies, as bullets and other projectiles, is particularly instructive, it showing the Roentgen ray apparatus and its use in military surgery. This method of detecting lodged projectiles was employed with excellent result during our operations about Santiago, during which the mortality rate, with the aid of antisepsis and the skiagraphy, was remarkably low. The work fills its scope and shows a praiseworthy development of this branch of surgery in that land. F. H. P.

A DIGEST OF EXTERNAL THERAPEUTICS, WITH NUMEROUS FORMULÆ ARRANGED FOR REFERENCE. By Egbert Guernsey Rankin, A.M., M.D., physician to the Metropolitan Hospital, Department of Public Charities. Boericke & Runyon Co. New York, 1899.

Dr. Rankin's "Digest of External Therapeutics" fills a most important place in medical literature. With excellent judgment the author has culled from a wide range of authorities the most practical suggestions upon external therapeutics of the best thinkers and teachers in the profession. The result is a work of rare excellence and of so practical a character that it will probably be consulted by the busy practitioner more frequently than any other book in his library. We congratulate the young publishing house of Boericke & Runyon Co. upon the very excellent series of books now issuing from their press.

DYSENTERIE (RUHR) von Dr. Kartulis. Arzt im allgemeinen Regierungshospital in Alexandrien. SPECILLE PATHOLOGIE UND THERAPIE herausgegeben von Hofrath Prof. Dr. Hermann Nothnagel, V. Bd., III. Theil. Mit 13 Abbildungen. 90 pp. Alfred Toelder, K. u. K. Hof- und Universitaets-Buchhaendler, I, Rothenthurmstrasse, 15, Vienna. Price, 3 marks. Bound in paper.

Dr. Kartulis is tolerably well known in medical literature on account of his different contributions to pathology, and particularly that of the Mediterranean area. Here he presents us with a good résumé of the subject—dysentery—under which he has studied all those diseases of different origin which are recognized under the term dysentery. The history, distribution, etiology, the bacteriology or parasitology, and mortality are first considered; then follow the pathological anatomy, where our literature, and particularly the labors of Councilman Lafleur and our army surgeons, shine forth. The parasitology is especially thoroughly studied. Symtomatologically, he dwells to quite an extent on the different manifestations of the amœbic variety, as well as on the other varieties of different countries under various names, and also devotes some space to the chronic variety. The epidemic form is considered separately. The sequelæ come in for mention. He does not mention renal sequelæ, certainly important ones. On treatment he is particularly strong, under the different headings—dietetic, medicamentous, local and antiparasitic. A bibliographical list ends the work, an interesting and in-

structive part of the "System of Medicine" which is being issued by Prof. H. Northnagel, of Vienna. F. H. P.

A Text-Book of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease. For the use of students and practitioners of medicine. By Arthur R. Cushny, M.A., M.D., Aberd. Professor of Materia Medica and Therapeutics in the University of Michigan, Medical Department, Ann Arbor. In one handsome octavo volume of 728 pages, with forty-seven engravings. Cloth, $3.75, net. Lea Brothers & Co., Philadelphia and New York, 1899.

The object the author has in view is to show how far the clinical effects of remedies may be explained by their action on the normal body, and how these may in turn be correlated with physiological phenomena. In dealing with each drug the author has attempted to unify the whole action by using the most distinctive feature as a center around which to group the less important symptoms. The work admirably fills a much needed place in medical literature, and will prove of especial value to the young physician.

HOSPITAL REPORTS.

CLINICAL LECTURE, PENNSYLVANIA HOSPITAL.

By Arthur V. Meigs, M.D.

AN OBSCURE CASE OF CATARRHAL PNEUMONIA.—TREATMENT OF ALCOHOLIC POISONING.

The case of which I first speak is that of an Italian, twenty-four years old. The case has been a puzzle all along. When admitted he had been sick two weeks with some sweating at nights and having a temperature of 103°. There were signs of a consolidation in the apex of the right lung and some moist râles at the basis. The liver, spleen and abdomen were negative as to throwing light on the condition of the patient. He was given 5 grains of carbonate of ammonium and one-half ounce of whiskey every four hours. Two weeks after admission some suspicious spots on the abdomen were noticed by the resident physician and he was given beta-naphthol and was sponged. Once when an enema had been given the discharge was tinged with blood, and ice-bags were applied and opium given. The blood, however, was only such as might have appeared from a number of causes and I do not believe it to have been a hemorrhage from ulcerated bowel at all. The spots were not definite. Blood was sent to the City Hall twice with an interval of nine days, and at both times the Widal reaction was reported to be positive.

The man's general condition had nothing to indicate typhoid fever, but pointed toward pulmonary complication. There was bronchial breathing noticed at times. When dealing with cases like this I wish there was no Widal test. Some bacteriologists say that it is not reliable when made with blood that has been dried. Some say that a blister should be made and blood serum obtained in this way. As given to us by the authorities it is practically worthless because it is so uncertain. At a recent meeting of physicians the city bacteriologist stated that the results of two years' work showed that the test was correct in 98 per cent. of the cases investigated. This was the general average, but not counting the many soldiers who have been in the city during the last few months. For some reason the test was wrong in probably 10 per cent. of these cases. Now these figures may be correct, but it is true that the test has not been correct in 98 per cent. of cases in the Pennsylvania Hospital. It has been wrong both ways—negative in undoubted cases of typhoid, and positive in cases that just as surely were not typhoid fever, one case being that of a woman dying of rapid consumption.

As to what has been the matter with this man, I think it is acute catarrhal pneumonia. The evidence is insufficient for typhoid fever. There has been a strong suspicion of tuberculosis, but I also exclude that. Many associated conditions might obtain in a case like this and must be thought of. There might be typhoid fever with inflammatory process, which is almost an essential part of the fever. Or there might be an inflammatory process with beginning tuberculosis. Or it might be tuberculosis alone. Any number of changes or combinations of these conditions might be made. If a patient has a sufficient degree of tuberculosis to be objective it is likely to remain. This man had bronchial breathing, râles, dullness, but they are gone now, as also is the fever. So I pronounce in favor of catarrhal pneumonia, though there is no possibility of an absolute certainty; the apparent convalescence is strongly in favor of this view.

I dislike the present doctrine in regard to tuberculosis being due in all cases to the presence of a bacillus. This view makes us hopeless and causes one to think that a fatal result is inevitable. There is no doubt that the bacillus exists, but there are worms in a manure heap, for instance, and yet we do not ascribe all the changes there taking place as depending on the presence of the worms and as being caused by them. Years ago the disease was not well understood, the French in 1600 speaking of the lungs as being rotten. Laennec was the first great discoverer that consumption was a disease due to tubercles, or a new growth. Afterward Niemeyer taught that there were two forms of consumption, one due to the tubercles and one an inflammatory or cheesy condition. This view was generally accepted for a time. Niemeyer said that if an individual had cheesy affection of the lung, the most dangerous thing that could happen to him was to get tuberculosis in addition.

Since Koch's discoveries the dual nature of the affection has been set aside by the profession generally and the bacillary form is considered as the only correct view. A few years ago Sir Andrew Clark lectured on what he called fibroid phthisis and asserted that there exists a non-bacillary form of the disease. Demonstration of the bacilli was asked of believers in the single type of phthisis and in three or four cases the bacilli could not be found. They maintained that the general doctrine still held, however. This would not be true if there was no possibility of a mistake in the investigation, for if proved in one case that no bacilli existed, the doctrine would go down. For my part I believe with Niemeyer that there are forms of consumption of the lungs without the presence of bacilli of tuberculosis.

ALCOHOLIC POISONING.

The man in question is an express driver of forty-four. He had been sick two weeks before admission with general weakness, vomiting, pain in feet, etc. His past history includes rheumatism, malaria, alcoholism. The real facts in the case are that toward Christmas of each year he works harder than common and naturally drinks more and is laid up for some time as a result. This attack is worse than any preceding.

The prognosis is unfavorable in this case. There is a beginning injection of the eyeballs and the nervous symptoms are worse. The man may get better, but will never be thoroughly well and strong again.

As to the treatment, I do not like to give alcohol in these cases, but take it away at once or in the course of a couple of weeks. Something must be given in its place and I think some form of ammonia is good. In this case the man is getting 5 grains of the carbonate of ammonium four times a day. As the heart is apt to give out digitalis should be given and 5 minims of the tincture is given three times a day. There is no specific treatment, and this with rest is thought to be all that is needed.

DIAGNOSIS OF TYPHOID FEVER REJECTED—ONLY ONE OF THE EIGHT PROMINENT SYMPTOMS PRESENT.

The young man who will be brought before you is eighteen years old, and was brought here on the 6th of February. There is nothing in the family history which bears on his condition, and he has never been sick before. He is a Hungarian, having been in this country for four years. He had been feeling badly for four weeks before coming here and at times he had to give up work. He was brought here in the ambulance after being in bed one week. He had vomited, had pain in his abdomen, pain in his head, diarrhœa, a chill, and poor appetite. He had a slight cough when he came, his tongue was coated, and it was thought that some enlargement of the spleen could be felt. His heart and lungs were normal. The man had fever on admission and has had same ever since until the last four days. On the 11th the temperature was 102 2-5°, the maximum during his stay here—a very moderate degree of fever. Yesterday and to-day it has been normal and ever sub-normal.

We sent a specimen of his blood to the City Hall for examination, and the result of the Widal reaction test was negative. His breath sounds are clear, giving us no positive sign, and no negative sign. His abdomen is natural in appearance, and his complexion is good. There is certainly no definite evidence of enlargement of the spleen at the present time, whatever may have been the indications in his history.

When I place my hand over his abdomen and tell him to breathe, there is somethng which slips up against my hand. Whether it is the spleen, or simply the edge of a muscle slipping over my finger I do not know. I am disposed to think, however, that it is muscular. You know, or at least you ought to know, that the spleen is quite loosely fastened in the abdominal cavity and could quite easily be pushed in different directions. I think that this is not the spleen, because breathing would not move it up so violently. I think that my finger is simply slipping over the edge of a muscle.

There is no evidence of any enlargement of the liver. The tongue is perfectly steady. It is somewhat coated, as you see, but not at all tremulous.

He has been put on dilute muriatic acid, five drops every four hours. Then he has been ordered to be sponged when the temperature reached 102°. This has been only the one time.

His appearance all the time has been very much what it is to-day. So that really almost the only objective sign we have is the continued fever.

Now what is the matter with the man, and what has been the matter with him? Of course all of you who have been here a number of times will think of the possibility of typhoid fever. I have told you before that there were eight prominent symptoms of typhoid fever, and these are: 1. Diarrhœa; 2. Spots on the abdomen; 3. Hebetude or delirium, but generally hebetude; 4, A tongue which is coated and tremulous; it is more invariably shaky than any other one thing. People will give you various descriptions of the characteristic typhoid fever tongue, but they will always fail some times. This man's tongue is not tremulous. 5. Epistaxis; there is no history here of his having any nose-bleed. 6. The complexion in typhoid fever is quite characteristic. There is nothing of that characteristic complexion here. The man is pale; but he is a tailor and all tailors are pale. 7. The pulse is rapid and dichrotic. It is noted that his pulse was dichrotic when he first came in. He has not even a rapid pulse. 8. The last is temperature.

Now how many of these are present in this case? Since he has been in the hospital he has had no diarrhœa. The movements were soft, but he has had only four of them in the nine days, and that could not be called diarrhœa. He has had a dichrotic pulse; but anybody with anæmia may have a dichrotic pulse, and he is anæmic. So this is the only one of the eight symptoms which we have here. Is it just to give a diagnosis of typhoid fever with this symptom alone?

If he continue as he is now, I should put him down as a case of simple continued fever. I was reading a lecture of Dr. Da Costa's the other day, in which he spoke of "irritative fever." It is a good term. This is the sort of case that makes people think they are curing more cases of typhoid fever than they used to. It might formerly have been called irritative fever or malarial fever. When it comes to the exact nature of the disease we are ignorant. It is some form of irritation. Perhaps it would not do to put it down on the hospital records as irritative fever, because that is not recognized, but I should call it a simple continued fever.

The treatment has been eminently successful—"there is nothing succeeds like success." I show you the case because it is interesting, and when you begin to practice you will often come across just such cases. If this man get well from now on, I don't think it will be just to call it typhoid fever.

CHRONIC ALCOHOL POISONING.

The man I shall show you next is thirty-five years of age. He has been in the hospital since January 15. His father died of consumption. He has had measles, scarlet fever, malaria, and it is said that he sometimes had jaundice. He has used alcohol freely. The history of this attack is that he had been sick for two weeks before admission. There have been a general weakness, a trifling cough, and he complains of pains in his legs and feet.

On examining the lungs some tubular breathing was heard—a few dry râles were scattered through both lungs. His pulse was rather weak. It was set down as a diagnosis of pneumonia.

He was given salicylate of sodium every hour until he had a drachm each day for several days. His urine contained albumin, no sugar and no casts. In view of his alcoholic tendency he was given an ounce of whiskey. Digitalis was given for his pulse and brought the pulse down. On the 4th of February he seemed flighty; he had had delirium. On the 6th the whiskey and digitalis was stopped.

Since I have had charge of him he has been out of his head; he lies here in this condition still delirious. He has never had an attack like this before, though he has been sick sometimes about the end of the year.

His temperature has been irregular; there has never been very much until lately. He has had all sorts of drugs given to him, and I will name them just to show how the minds of the physicians have alternated in the diagnosis; Carbonate of ammonia, Dover's powder, sodium salicylate, strychnine, trional, bromide of potassium, whiskey and digitalis. What is the matter with him? I want to go over him physically before I answer that question. The heart sounds are quite natural. Over the lungs there is a fairly good percussion resonance. I can't find anything the matter with them unless there is some feebleness of the breath sounds at the base. When a man has been lying in bed a long time there is very apt to be some such change. The liver is not diminished in size; it is possibly somewhat enlarged. Now, I can't tell you what it is, but there is something very peculiar in his expression. It is not in his complexion. If any of you can recognize this it may be of help to you afterwards. It may be something about his eyes.

Now he is suffering from alcohol poisoning. He is an express messenger, and has been working hard. Every year towards Christmas there was extra work and he was drinking furiously. I presume he never gets drunk. When he came in he had bronchitis, and there was slight bronchial breathing. Instead of getting better, he gets "queer" in the head. He is restraining himself and does not exhibit his insanity before you now. But there is something queer in his expression and he says many queer things.

On physical examination we find no distinct evidence of any organic disease. What part of him then is it that is poisoned? His nerves, principally—his brain and spinal cord. Probably there is no definite lesion there, and if you were to make an examination of the tissue under a microscope you would be none the wiser. If you were presented with the body of a man who had died of alcoholic poisoning you might not be able to discover of what he had died. It often produces diseases of the organs, but on the other hand it often produces a condition like this where there is no disturbance but in the nervous system.

If he continues to be insane, it may go on to softening of the brain. But when you examine the brain you find there is no softening, so the term is not a good one; on the contrary there will be hardening. As to the prognosis I am somewhat in a quandary. I am inclined to think he will not get well; his nervous system is going the wrong way, and his lungs will give out, or his heart. Or, after a while he may take a turn and get better; then he will drink again and have another attack of sickness and die. He has had a blow from which he will never recover.

In regard to the treatment, there is no specific for alcohol poisoning. My advice is not to give much alcohol. I am not a believer in continuing it in moderate quantities. Take it away altogether. That is what they do in opium poisoning, give diminished doses, and withdraw it entirely in the course of two weeks. I do not care to continue giving them that which produced the disease. Then, if you take it away, you should give them something to take its place. For this I would give carbonate of ammonia, 5 grains of it four times a day. Then to sustain the heart and lungs 10 drops of digitalis may be given three times a day. And that is the treatment this man is getting.

TYPICAL TYPHOID FEVER.

This man is twenty-six years of age. He was admitted here the 27th of this month. There is nothing in the family history bearing on the man's He felt well until two days before coming to the hospital, when he had a headache, which he attributed to having taken some linseed oil. His bowels were not open for three days; there was pain in his back; there was no vomiting, no chill, no cough and no dyspnœa. There was fever; his temperature going from 103 2-5° to 104°, being nearly

105° on two or three occasions. The tongue was a little coated and tremulous, the pulse slightly dichrotic. The heart examination is negative, except for an anormic murmur; the lungs are negative; there is no enlargement of the liver or spleen, and the abdomen is negative. That is the history.

Since the man has been in the hospital—that is, for seven days—there has never been any movement of the bowels, except with an injection. This has been given three times, and on each occasion the movement following was soft and loose, not constipated. The tongue, you see, is a little tremulous, and it is red and dry in the center, moist and silvery white on the outer portions. When the man was admitted the abdomen was negative, but now there is more tympany than is entirely natural, and there is a distinct rash all over the abdomen, numerous little rose-colored spots, which disappear on pressure. You could not have a more typical example of the rose-colored rash of typhoid. When I percuss over the region for splenic dullness there is tympany. Dr. Da Costa not long ago used the expression "spleen masked by tympany." If the intestines are crowded up over the spleen it may be analyzed, but we do not have the dullness.

The man's pulse is distinctly dichrotic in character. He cannot be said in one sense to have diarrhœa, and yet in another sense he can, because when the movement does come it is loose. He has spots that are most typical; the tongue is quite a characteristic one. There is nothing typical in the complexion. The man has negro blood in him. The temperature is high, but for the last few days it has been coming down to between 100° and 102°.

I need hardly tell you that this man is suffering from typhoid fever. He has nearly all the characteristic symptoms. I brought him before you because it is a typical case. You know I have often told you there are eight important symptoms of typhoid fever—diarrhœa, spots, hebetude, a tongue coated and tremulous, epistaxis, dichrotic pulse, and characteristic complexion. I can distinctly count five of these conditions as present. You often do not see the rash so distinctly in persons of colored blood.

This man has been put on the use of 5 minims of dilute muriatic acid every four hours. Then he was to be sponged when the temperature was above 102°, every three hours, with water the temperature of 50°. He has also had one-half ounce of whiskey every four hours. I don't believe it necessary to give whiskey when the patient is going on well in ordinary cases. What is the use? I prefer to keep it for some emergency later on, and think it is well not to give it in as mild attacks as this man has, when we have every reason to think he will recover.

We have lost, I think, in the last few months very few cases of typhoid fever that I should have thought could have been saved at all. A man died the other day. When I had looked at him I thought there was something more behind the disease, and we found afterward that he was an old and hard drinker. He had furious hemorrhages, until finally he died day before yesterday. Now, even those who believe in the routine use of the cold tub always stop when it comes to hemorrhage. With the exception of cases of this kind, where there was something more behind the typhoid, we have lost—at least, I have lost—very few cases of the disease, and I have not had to agitate myself as I used to do with thinking that perhaps if I had used some other method the man might have been saved.

MALARIA.

This man was admitted on the 25th. He is a painter, and he is twenty-three years old. His family history is negative. He has had measles, scarlet fever, rheumatism and diphtheria, also enteric fever, and several malarial attacks. The last malarial attack was in the spring. Most of this sickness he had when he was young, and he has generally been healthy. He has recovered from an attack of typhoid fever, which he had in the Philadelphia Hospital about one month ago. About seven days before he came here he had headache and fever; the bowels were loose though not frequent; he had pain in the neck and feet; there was no epistaxis this time; there was a slight cough. He lives in the neighborhood of Sixty-third street and Darby Road, which is a highly malarial neighborhood.

He was admitted with a good deal of fever, his temperature being 103 3-5°; but on sponging it fell, and after the first one or two times the sponging was stopped. The temperature has not been so high as in the other case we have just had. This is zigzagging, a constant fever but not very high, and not much variation between mornings and evenings. The first two bowel movements after coming were yellow and quite liquid. The tongue, you see, is very tremulous, much more so than in the other case, and covered with a white fur. A note was made that this man had a number of spots. There are several here which you see do not disappear on pressure; here is one that does. The rash is not as characteristic as it was in the other case at all.

Although there is tympany here, I should think there probably was a moderate degree of enlargement of the spleen. It's a thing you cannot ascertain absolutely at all. You often see it noted that the spleen is large, and find in the autopsy the spleen is small. You cannot ascertain the size unless you can get it between your fingers and feel it. The pulse was distinctly dichrotic when he was first examined. Examination of the blood on the day of admission revealed the presence of great quantities of the plasmodium of Laverau of the quotidian kind, which is the most common.

Now in this case we have diarrhœa and spots. Are they the spots of typhoid or not? There is no hebetude, but the man is indifferent. People with malaria are just as apt to be indifferent as typhoid patients. The tongue is characteristic of typhoid in being white and tremulous, which is not characteristic of malaria at all. The complexion is in no wise characteristic. He has a dichrotic pulse and elevated temperature. Now what is the matter with him? There could be no doubt that the man had been suffering from malarial poisoning, and he may have an addition to this of typhoid fever. But this would almost involve the supposition that the diagnosis of typhoid made so short a time ago at the Philadelphia Hospital was incorrect.

There is a good deal of criticism of the term typho-malarial fever. When the army physicians first introduced this term they meant that the patient was suffering from the two forms of disease at the same time. When a man comes to talk about typhoid pneumonia that is a different matter. It is often used to cloak one's ignorance. But typho-malarial fever is a good term.

I am not able to tell with positiveness whether this patient has typhoid fever or not. I am disposed to think today that it is a case of continued malarial fever. If the plasmodium here is of the tertian variety it has not yet been brought to a stable form; for the tertian variety of the disease the patient has not. If he has malaria it is of the continued type. I have never seen a case of remittent fever which will just answer the description in books. The remittent form here we do not see; but we do see the intermittent fever, and the irregular continued form—and that is what he is suffering from.

It is interesting about this rash. Physicians are not inquiring so much as they used to about the rash of typhoid fever. They see a few spots on the belly and they say, "O, yes! it is typhoid fever." It is a very common thing to see spots on the abdomen, little acne spots or spots of inflammation.

This patient was put on 16 grains of quinine, 4 grains in solution four times a day. This was taken for three days. Yesterday the quantity was reduced to 8 grains a day, and very likely after a few days we will put it up again. If you take ordinary intermittent fever, in two or three days you will arrest it by giving 16 grains of quinine. But in these continued fevers it often takes a week or two. And it won't make any difference, you won't cure your patient any faster by giving larger doses. Sixteen or 20 grains is enough, and 30 grains or any other quantity over this will not vary the length of the disease one hour, in my opinion. In the course of a week or two or three the fever will probably be broken.

This matter of dosage is a very important one and one that it is difficult to get any satisfactory information about. I have seen large doses of quinine given, but I have never seen any good effects from it. You must simply possess your soul in patience and go on in the reasonable way, and not with the hope of getting results from large doses, which are no use or may be injurious. I did once allow as much as 30 grains a day to be given for weeks in a case of neuralgia until thousands of grains were given, but it did no good.

"CHRONIC CATARRHAL PNEUMONIA."

This is a shoemaker by occupation, thirty-three years of age. He was admitted to the hospital March 18. There is nothing in the family history. He himself has had measles and smallpox. He never had any rheumatism, and does not drink much. There is some vague history of malaria. He is a Pole. He felt well till two weeks before coming here, when he was exposed to cold and afterwards taken with

pain in the left lung posteriorly, with cough and expectoration. There was some fever. The temperature was 101°, then nearly normal, then rose to nearly 104° and fell to nearly normal again. It has been that way for the last few days. So he has had slight fever on two occasions, and the temperature is a little irregular, but only slightly so. He tells us he had not been a very healthy man previously. He says he had appendicitis and was operated on in this hospital.

There is marked difference in the sides of the chest if one can see clearly. The right side is smaller than the left. There is no definite difference of expansion. Dullness on percussion exists over the lower portion of the left side posteriorly, while the right side is certainly smaller. A man who sits all the time as a shoemaker does you will seldom find perfectly symmetrical. There is evidence of a much greater amount of air in the right side, although it is smaller. About the middle of the lung on the left side there is distinct bronchial or tubular breathing and a few fine crackles. Vocal fermitus and vocal resonance are both less strong on the diseased side.

Now what are we dealing with here? When I was a student and we had a case of this kind brought in, I used to think, "You are giving us another of those stupid old consumptives." But this is one of the most interesting kinds of cases, one of the most obscure, one of the most difficult to make a diagnosis and hence a prognosis. There has been failure here to find any tubercle bacilli, by the examination of an expert.

It answers perfectly, in my opinion, to a description given by Niemeyer of what he calls chronic catarrhal pneumonia.

I used to think if a man had a cavity he was going to die. I have learned to be much more careful about my prognosis. My belief is that the description given by Niemeyer is the correct one and that this is the disease in this case.

We have given this man for treatment 5 grains of carbonate of ammonia every four hours; and ¼ grain of opium every four hours, and every two hours at night, to keep his cough quiet. That form of treatment frequently gets them better. But he has that sub-acute inflammation of the lungs.

What I want to impress on you by this case is not to make a hasty prognosis in cases of consumption and say they are going to die, for it often is not so.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.

SURGICAL SOCIETY.

Surgical Treatment of Hemorrhoids—M. Barry—At the risk of being considered a laggard I defend the use of the incandescent iron in the treatment of certain varieties of hemorrhoids. It applies to other indications than those that demand the bistoury, and I have often witnessed the harmlessness of this method, taking care not to neglect post-operative needs. For hemorrhoids I employ, according to the cases, Richet's pincers, the thermo-cautery and the bistoury. The indications for Richet's pincers have already been designated. I would add two others, the existence of enormous hemorrhoids and very marked anæmia. The thermo-cautery is especially applicable to well-localized hemorrhoids, and for patients who fear a more energetic treatment. Cauterization is opposed because of the pain it causes. If volatilization is used, pain may be avoided by protecting the skin from the rays. According to M. Quenu patients do not suffer so much when there is no infection; infectious accidents are rarely observed. It is not surprising that there should be suffering; forcible dilatation provokes it greatly, and especially so when cauterization and ablation are employed. As respects sutures, many methods are recommended, and as to section and union of the skin and mucous membrane it should not always be employed here. If the integument is distended and elongated, better to cut it off than have a troublesome cutaneous bunch later on. M. Berger said there was not sufficient distinction made between ordinary hemorrhoids and hemorrhoidal prolapsus, but it is of the first importance to distinguish bleeding, painful, inflamed and procident hemorrhoids. For bleeding, painful and inflamed hemorrhoids simple dilatation succeeds well. If there be a voluminous prolapsus, with relaxed sphincter, dilatation is inapplicable; cauterization should be employed, not with the thermo-cautery, but with Richet's pincers, always reliable. Patients so treated get up on the eighth day. A simple dressing protects the small wounds, which speedily cicatrize. Have employed volatilization for twenty-five years; no serious accidents; encountered hemorrhage once; easily arrested. M. Tuffier: The treatment of hemorrhoids varies with the indications; in some it is useless to operate, in spite of occasional loss of blood; others, on the contrary, demand intervention, where pain, hemorrhage and prolapsus are present. In some cases there is no pain; in such, forcible dilatation succeeds well. In abundant hemorrhage look at once for its source; but the principal accident is a rectal prolapsus; in such cases the intervention should not always be the same. I have practiced all methods, and am convinced that each has its indications clearly marked. M. Reclus: While of the opinion of M. Berger, that hemorrhoids require different operations, I believe that entire removal gives better results than ignipuncture. As a general rule I excise all diseased parts without fear of contraction, and without troubling myself with decollating the mucous membrane, as is recommended in certain methods. In none of my operations has there been any contraction. Be careful not to remove the skin, for fear of a troublesome eversion of the mucous membrane in the future. As respects pain nothing positive can be said, as it varies in different individuals, but there seems to be less after entire ablation.

SURGICAL SOCIETY.

Blenorrhagic Myelitis—M. Renant presented a case of the above. Six months after the beginning of the blenorrhagia patient became prostrated, with inability to walk, and manifested spasmodic paraplegia, with incontinence of urine. Another patient was attacked, after repeated blenorrhagiæ, with polyarticular blenorrhagic rheumatism, and at present has vertebral arthritis, with pronounced aphasia. M. Renant did not venture to affirm that the different forms of arthritis and myelitis were really of blenorrhagic origin. There is no criterion permitting the formulation of such an etiological diagnosis. He suggested a revision of the observations already published upon blenorrhagic myelitis.

Erythematous Lupus—M. Du Castel exhibited a case of erythematous lupus of the face, of the typical variety—"vespertilio"—in which there was profound erythema, with epithelial excess and desquamation. The interest of this fact consists of the lesions observed in other parts of the body. The fingers and toes are ensheathed in erythematous lupus; moreover, there are many points, round and red, upon the hands, elevated, with clearly defined borders, and large as a bean. These spots at the beginning have the form of flabby vesicles. The affection lasts six months.

Melanic Sarcoma—MM. Hallopean and Léri exhibited the viscera of a patient affected with the above. The neoplasms are numerous in the majority of the organs, but only portions of them are melanic. This fact shows that the melanosis is not the essential element of these tumors, and that it is probably due to the nutritive activity of the parasitic agent operating in certain localities.

Psoriasis—M. Hallopean presented a case of an eruption of papulæ surmounting pustules with scaly prolongations extending deeply into the sebaceous orifices. The eruption was clearly psoriasic, but each one of the elements of the psoriasis was covered with scales with intra-glandular prolongations. This proves that the small miliary abscesses described by Munro in his histology of psoriasis may show themselves to the naked eye by the formation of pustulettes, and that the sebaceous follicles may be the starting point of these suppurations. Then a suppurative form of psoriasis must be admitted.

Hysterectomy for Uterine Cancer—M. Michaud—Like all my colleagues, I think that total abdominal hysterectomy should be applied to certain cases of cancer of the uterus. In these cases, numbering eleven, the cancers were operable, for I consider extension to the vaginal walls and the lateral walls of the pelvis as counter-indications of the operation. In all my cases the operation was laborious, and in many instances it was necessary to remove a large portion of the broad ligaments. I have never been able to discover glands in the extracted masses. Search for the ureters should be made with the greatest care, as it is well known how difficult it is sometimes to avoid wounding

them, and in my two last operations greater care than usual was employed to discover them, and so to operate more surely. Besides the advantage of seeing more clearly all the lesions, abdominal hysterectomy permits the uterus to be attacked at its fundus, which is not ulcerated, while through the vaginal passage the cervix, which is always more or less diseased, is seized, and thus liable to cause inoculation. However, the latter operation has indications that are well known. Again, it should be foreseen that abdominal hysterectomy is not exempt from danger; in one case death rapidly ensued from embolism. The majority of those operated upon have rapidly recovered strength; in three, only six months have elapsed since operation; of eight others two have died from relapse after twenty and nine months. Four are doing well after eighteen and fifteen months; a seventh has lost vision; the eighth has had no relapse for nine months. M. Segond: Considering that total abdominal hysterectomy is an operative progress that merits study, I remain a partisan, in many cases, of vaginal hysterectomy. In the presence of very extensive lesions I am opposed to abdominal hysterectomy, which presents more disadvantages than advantages, contrary to the opinion of Professor Terrier. It is but a small result to obtain relief from pain at the cost of urinary or rectal fistulæ, as is sometimes seen.

Vaginal Hysterectomy Against Acute Puerperal Infection—M. Tuffier reported three cases of vaginal hysterectomy, after all other curative measures had failed. One of the patients was cured; the other two died. In each there was only a local uterine infection, but with threatening toxic accidents. Eight days after delivery the first accidents manifested themselves; injections, curettage, and serum were ineffectual. Temperature continued at 40°. Hysterectomy was performed next day; temperature fell to 37°; cure rapid. The second patient, because of retained placental débris, had accidents of infection, which persisted despite curettage and other usual means employed. Hysterectomy produced temporary amelioration, but patient died on fifth day, of septic peritonitis. The third patient succumbed, after ten days, from similar accidents, though hysterectomy was done. In such cases two questions arise: In the first place, when all else fails, is hysterectomy indicated? If it is proved that the infection resides in the uterine parenchyma and is the cause of the accidents, then there should be no hesitation. But, as yet, there is no such proof; still the reports from foreign sources are worthy of consideration. Of thirty-five operations there were twenty cases and thirteen deaths. Such figures are favorable to the operation. The fall of the temperature after hysterectomy should be taken into account, and it presents an argument in favor of intervention. To what operation should recourse be had? The following results are statistically reported: In nine total removals, six cures and three deaths; in nine supra-vaginal amputations, eight cures and one death. It would then seem reasonable to prefer the latter. It may be remarked that these figures are not extensive, and on the other hand the real cause of death is not made clear. It should be added that by reason of the softness of the uterus there are difficulties in operative explorations, and hemorrhage is not easily controlled. Have a care not to force the forceps for fear of cutting the tissues. As to the question of the indications or contra-indications for vaginal hysterectomy, it cannot be positively answered. M. Segond: Supposing that there is the indication for practising this operation, which is always exceptional, should it be done above or below? Vaginal hysterectomy is difficult, and there is the danger of perforating the rectum and bladder; uterine ramollissement seems to be a counter-indication.

Lumbar Puncture in Meningitis—M. Netter presented specimens of liquids obtained from lumbar punctures in a case of meningitis. At the first puncture the liquid contained more pus, less in the second, made after a few days, and continued to diminish in subsequent punctures, numbering eleven. M. Netter did not attribute the cure of his patient exclusively to the punctures, but claims the best part of it for the treatment to which his patients were submitted, consisting of warm baths at 38 to 40° every three hours, and sub-cutaneous injections of serum.

Intermittent Form of Albuminuria—M. P. Londe communicated eight observations of intermittent albuminuria occurring in six families. There was nephritis among the antecedents in two instances; in all cases there were neuro-arthritic antecedents. The beginnning was marked by digestive disorders, anæmia or head troubles. The disease revealed itself at puberty, and was characterized by insidiousness, by intermittence, and by symptoms disproportionate to the apparent trouble of the renal function. The urological signs resembled the cyclic albuminuria of Tessier, Lyon, and the digestive troubles and dyspeptic albuminuria of A. Robin. The disease recalled also the albuminuria of growth, and that of sympathetic origin of P. Narie, and the chloro-brightism of Professor Dieulafoy. In fine, it was a disease of evolution, the mild form of which was observed, but which comported with a graver form in which there were certain facts of chloro-brightism and slow atrophic nephritis, comprising the nephritis by arterial aplasia of M. Lancereaux.

ACADEMY OF MEDICINE.

Paludal Aortitis—M. Laverau said: At the last meeting M. Lancereaux described paludal aortitis as a well-defined morbid type. Authors who have closely studied paludism make no mention of paludal aortitis. M. Lancereaux responds that aortitis takes too long to develop to give military physicians time to observe it. This objection fails as respects officers and sub-officers. Moreover, in Algeria and the colonies it often happens that military doctors attend a large number of civil employees who have lived a long time in the country. I cannot help comparing what passes for paludal aortitis with what existed when Bouillaud announced the relations between rheumatism and endocarditis and pericarditis, followed by innumerable confirmatory observations. On the contrary, for the last seven years that M. Lancereaux has signalized paludal aortitis, it has never been discovered except by him and his followers. M. Huchard, in his treatise on diseases of the heart and aorta, said he had observed aneurisms of paludal origin, but the passage consecrated to the study of the influence of paludism in aortitis ends with these words, which do not denote a very profound conviction: "New confirmatory researches are necessary." If it be admitted that the signs of aortitis may pass unperceived by physicians attending upon paludics, is it so with the symptoms of angina pectoris, which, according to M. Lancereaux, would be so frequent in paludal aortitis?

Of the thirty-one observations reported by M. Lancereaux, we find those patients considered as paludal that have been attacked with intermittent fever twenty or thirty years previously, and who should be considered as cured of their paludism. Indeed, we find patients who have sojourned in Algeria without being attacked by paludism. As regards the origin in the external coat that is characteristic of paludal aortitis, it does not seem to be demonstrated by the observations of M. Lancereaux, in which the three coats were always found more or less altered. M. Lancereaux: Our great writers upon syphilis, especially Ricord, were not acquainted with all the visceral manifestations of syphilis that are so well known to-day and admitted by all the world. Why? Because they observed only the acute periods of syphilis, chancre, mucous patches, etc., and did not follow up their patients for years. For the same reason physicians who are occupied with acute paludism and intermittent fever do not see the remote effects of the disease. M. Laverau pretends that many of my patients are not paludal, because they had no intermittent fever. Intermittent fever is no more necessary to cause paludism than is lead colic to cause saturnism. We may have the chronic disease without the acute accidents.

J. A. C.

CORRESPONDENCE.

CHRISTIAN SCIENCE AT NEEDHAM, MASS. PHYSIOLOGICAL TREATMENT FOR DYSENTERY.

Doubtless "Christian Science" at Needham is the same as it is elsewhere—neither Christian nor science, except that its practitioners exercise a helpful influence on the mind, and do not lessen the chances of their clients' recovery, as is so often the case with physicians, by administering potent drugs.

The Hedenberg boy died of dysentery, which is conceded to be a very fatal disease under the routine drug treatment. Even under any treatment, with the dietetic management common to all schools, there are a great many fatalities. But the disease yields readily in most cases to skillful

hydro-therapeutic treatment, combined with therapeutic fasting, the latter being particularly appropriate in dysentery, to prohibit further wounding of the raw and bleeding mucous membrane of the intestines by undigested milk curds and other débris of indigestion. It is hardly to be supposed that the Christian Scientists are wiser in the matter of diet than regular medical practitioners; indeed, since it is the foolish boast of the former that they scorn all idea of aid from hygiene and the study of dietetics, it is altogether likely that they feed worse than the average doctor, and hence do much to counteract the benefits of their non-drugging treatment.

"No sensible person can doubt the immense influence exercised by the mind upon the material body," remarks the Boston *Herald*, in an editorial on the Harold Frederic case. "Mental confidence in recovery is a great help in bringing about a physical cure, while despondency and doubt concerning the future may extinguish the spark of life as effectually as the administration of poison." It is always well, in discussing these cases of deaths under Christian Science management, to remind ourselves and the public of the fact that the chief reliance of those medical men who most vigorously assail the Christian-mental-faith-cure, harping-on-one-string treatment, is in drug poisons. It seems that the Herdenberg lad had the favorable mental confidence in Christian Science to the limit, and a thorough dread of the drug treatment; hence, had the latter been enforced in his case, all hope would have fled from his mind, to be replaced by a deathly terror, and there is no reason to believe that his life would have been saved, or even prolonged by drugs.

The writer's criticism of practitioners of all schools is that so few of them ever learn and practice genuinely helpful measures for the relief of diseased bodies. Take, for example, a case of dysentery such as proved fatal in the Herdenberg family at Needham, and which has excited so much attention; in some way, it matters little how, so far as curative treatment is concerned, the tension of the intestinal vessels has been destroyed, or at least relaxed, and causes the flow of their contents in a way that by and bye issues in the flow of blood itself from the bowels. It shows itself at first as a merely unusual flux from the bowels, and at this stage it is a very simple and easy matter to right the mischief. To throw up about a breakfast cupful of fresh cold water will, in many cases, produce a cure. The entire disturbance is set to rest by this one application alone. If the same sort of motions recur the same remedy can be repeated; and even where a violent purging has come on, seldom is more than a third cold enema required. The cold introduced internally by this means instantly braces the relaxed bowels, and by sympathy braces all the vessels concerned, and the patient at once feels righted all over without any other treatment. If there is reason to suspect that bad water is at the root of the trouble a change should at once be made; but oftener than otherwise the trouble has been caused by bad or over eating. The alimentary canal may be loaded with putrefying food substances, causing ptomaine poisoning as well as the effort to speedily empty the bowels, which good work will be accomplished by the first few evacuations; then the cold enema is brought into play.

As the disordered state of the stomach and bowels forbids the hope of normal digestion and assimilation of food, everything of this nature, except fresh soft water, should be sacredly withheld for a time. No ordinary diarrhœa can withstand the influence of a day or two of fasting, and, at first, instead of drug purging, sufficient kneading of the abdomen to speedily and completely empty the intestines, even with no other treatment whatsoever. So far we have considered only the first indications that the vessels have been relaxed and require instant bracing; but even at the very early appearance of this relaxation the case may assume a very serious character; blood may appear almost at the very onset. Even so, we would still resort to the same remedy, and observe the effect of bracing up by cold, clean water.

But the usual course, under neglect or bad treatment, will be the passing of mere relaxation in the tension of the vessels into more or less of injury to the coats of these vessels, causing pain and great distress. Mere cold will not meet the case now. It may be necessary to use water a little above blood heat, with the addition of a trace of acetic acid—a mere trace—just enough to give the mixture a slightly acid taste; beyond this it would prove irritating and do harm. What is wanted is just as much acid as will act healingly on the injured vessels and no more. An enema of this character may be repeated so long as required, with perfect safety and good effect. These enemas should be very resolutely followed up so long as they give the least comfortable feeling.

In any serious case of dysentery the damp bandage is a very powerful and soothing remedy, as follows: Two folds of coarse towel wrung tightly from ice water, placed on two similar folds of dry and brought closely around the body, the damp part next the skin, of course, and snugly pinned. It should be wide enough to well cover the entire abdomen. The first shock only of the cold is for the moment disagreeable; it soon heats up, becomes delightfully comforting, until after a time it gets too hot and requires freshening, say in an hour, or two, or three, according to the degree of fever and the patient's feelings.

For drink, moderate portions of fresh soft water, a little above blood heat, may be allowed as often as the patient desires. If a trace of acetic acid or a few drops of lemon juice be added it is well, if agreeable to the patient; and such a portion, say a half teacupful for an adult, should be administered as often as every hour, in any event, together with very small draughts of cool water, if the patient desires. It is essential to maintain the fluidity of the blood at the normal standard in this way.

Relapses, so often fatal, are generally caused by premature feeding. In the last case treated by the writer, that of his own eight-year-old son, the little chap lived on soft water exclusively for five days; then the test of genuine hunger was a small piece of stale Graham bread, "dry on the tongue," which he took with keen relish, chewing each mouthful till it was completely dissolved before swallowing. The attack, starting out very violently, was shortly transformed into what might be termed a comfortable sickness, and the recovery was not long delayed.

We have thus endeavored to describe the correct physiological or hygienic treatment for dysentery. We are said to be living in a Christian land and in a scientific age; it might therefore be said that the truly curative treatment for disease in any of its forms is applied Christian Science; but to treat the mind only, to the neglect of the diseased body; or to treat the latter badly, as with the potent drugs so commonly employed by strictly medical men, and by forced feeding, which is the rule with physicians of all "schools," is "most heathenish and most gross."

CHAS. E. PAGE, M.D.

154 Tremont street, Boston

ON STATE EXAMINING BOARDS.

Messrs. Editors:

On page 210, July, I note your opinion relative to "Medical Examining Boards." Your idea of reciprocity is a good one, if the State had a right to establish these boards.

The argument to reciprocate carries with it the idea that *the right to establish such boards exists*, while in reality the board itself is a fraud, having no right to exist at all, being contrary to law.

I am of opinion that those who framed the law knew that they had no rights in the matter and that they were going contrary to the fundamental principles of the constitution—equal rights to all, special privilege to none.

For the sake of common honesty the States who have given these boards existence ought to test the law before the Supreme Court of the United States. If they have a right to be a board under their rule, *then reciprocate.* If the court decides them a fraud, then put the law and board out, and make them refund the money received for fees.

I contend that the board has no rights, and that in receiving money for a registry fee they obtain money under rather misty circumstances. Another point, if the board has a right to exist, the colleges have no right to charge a diploma fee, as it is in twenty odd States not worth one cent to the man after he goes from the college doors. The ex-boards pay no more attention to it than to a piece of blank paper. This being the case in twenty odd States, in what predicament do these colleges put themselves? Before the late scare that the quacks were about to capture the medical business of the United States, a diploma was a passport anywhere. But to-day you are not asked about it at all; only "Can you answer seventy-

five out of a hundred questions" that are written down for you?

It is pretty widely thought that the ex-boards do not want to come to the test as to their validity. Everywhere where the test has been made in the State courts the matter has been decided *against the ex-boards.*

It would do some of us a little good to read the article of Dr. Lockhart in *Medical Summary*, of August, 1899, page 168, "Examining Boards Illegal." Also it would be entertaining reading of the "tricks that deceive" could they be brought to light, by means of which these medical ex-board laws were engineered through State legislatures. I refer you to page 12, "Medical Monopoly Exposed," by Dr. Lockhart, St. Johns, Washington.

Here is a quotation from an article by Dr. George. C. Pitzer, of St. Louis, Mo., in the *American Medical Journal*, page 395:

"From the very first day that the medical profession sought the protection of the law in the pursuance of the practice of the healing art there has been a gradual degeneration of professional character; a passing from what should have grown to be a noble *profession*, famous for its wisdom, good works and charity, to the common condition of a *business*, with the environments and selfish political schemes which characterize the lowest ward politician."

This is pretty strong language, but if it is a fact the scheme, instead of cleaning out the unworthy, and elevating the profession, has done quite the reverse, *i. e.*, made the profession worse. Here is another sentiment from same author: "And we should always defend its honest, competent practitioners, wherever found. We should also persistently oppose any law that seeks to prevent suffering people from employing any practice they want when they have a chance to obtain it." Send for the *American Medical Journal*, St. Louis, Mo., September, 1899, page 395. I have myself seen the tyranny of these ex-medical boards exemplified in so many ways that I am always pleased to see a kick at tyranny "of such sort," more especially as the blow falls most often on the old man of years of practice.

No, I am opposed to reciprocity *unless these medical examining boards can prove that they exist under competent law*, and that they are not, as they now exist, taking money that they should not.

BEN H. BRODNAX.

Brodnax, La., September 10, 1899.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medecine of New York, Etc.

Urotropin seems to be an ideal antiseptic in the treatment of kidney and bladder affections. It is decomposed by the acid urine into ammonia and formaldehyde, and the bacteria are destroyed promptly. Our experience with it has been most satisfactory.

Prof. Grube, of Toledo, in the *Jour. of the Am. Med. Assoc.*, March 25, 1899, describes his experience with hydrozone and glycozone in *la grippe* and its sequelæ. He speaks highly of these agents in middle-ear complications, which is a very important addition to our curative means in a class of cases apt to be serious.

On the Therapeutic Use of the Colloidal Metals.* (By Dr. Arthur Schlossmann, Tutor at the University of Leipzig)—The explanations of Dr. Lottermoser, published in the March number of the *Monatshefte*, in regard to the chemical properties of the colloidal metals, have at once raised great hopes as to the therapeutic results to be obtained from them. The preparation of silver, a metal never before usable in the pure state, in a soluble form most favorable for absorption, and of metallic mercury, so long employed, in a colloidal modification, seemed to offer possibilities of a most exact dosage and a very ready absorption. In the case of the colloidal silver the preparation was entirely new, and enables us to employ the medicinal properties of the metal itself. The salts only had been previously used; and these have very different actions in accordance with their acid constituents. * * *

In conclusion, the author states his conviction that silver in its colloidal state is an excellent, non-irritant and non-poisonous antiseptic that deserves to be tried not only in surgery, but also in all the various fields of internal medicine. No other remedy so quickly and thoroughly cures the infectious diseases of the mucous membranes; above all, the blenorrhœal ophthalmia of the new born and colicystitis. Colloidal mercury, on account of its minimum toxicity, ready absorbability and prompt action, is also deserving of general attention.

In a note the author states his belief that simple solutions of the pure metals should not be employed, but that albumen to the amount of the beaten white of one egg to 200 ccm. (6¾ ounces) of the solution should always be added, even when the drugs are employed as ointments.

Ichthyol Externally in Rheumatism.—Ichthyol has been shown to be an excellent remedy for the external treatment of articular rheumatism, particularly of the chronic form, because of its analgesic and reducing properties. Friedrich Koelbl *(Wien. Med. Ztg.*, XLIII., Nos. 5 and 6; *Ga. Jrnl. of Med. and Surg.*, reports having treated 117 cases of acute articular rheumatism at the most various stages and with the most satisfactory results. The method of application is as follows:

The ichthyol solution, prepared, for instance, from ichthyol 50 parts, glycerine 20 parts, and water 30 parts, or from ichthyol and water in equal parts, is warmed, and mull or calico bandages impregnated with it. With these prepared bandages the affected joint is lightly bandaged. It is advisable to clean the affected part with warm water previous to applying the bandage, which should be covered with an impervious fabric to prevent evaporation. The joint so treated is next covered with dry cloths heated to from 40 to 60° C., and these applications renewed every ten minutes at first, and later, every half-hour. Instead of the solution, pure ichthyol may be used, or an ointment of equal parts of ichthyol and lanolin, which may be painted on the affected part with a soft brush. After the joint has been treated in the above described manner for three or four hours, according to the intensity of the affection, the ichthyol bandage is renewed, the hot applications, however, being omitted, and the bandage is permitted to remain for from four to six hours in place. It is then renewed, and the joint cleansed and bound with a soft bandage. As a rule the pains are considerably reduced even after the first packing, the joints softer and more supple, and their movements freer, not only in parts directly treated, but in all the other joints. Repeated comparative trials have shown that hot packings alone do not effect, even in the slightest degree, the satisfactory result yielded by ichthyol packings. In chronic articular rheumatism the treatment must be carried out for an extended period in order to obtain lasting results. These ichthyol packings fully replace the sulphur and mud baths heretofore recommended. Many invalids, unable to visit any health resort, were cured by these applications every evening on return from their daily occupation. The treatment is also of great benefit in true gout (arthritis deformans).

Blood Treatment in Diphtheria.—Dr. Sanfield, of Cincinnati, reports the following case *(Med. Rev. of Revs.)*: "Mary Bromley, American, age twelve, was first seen January 18, 1897, suffering from an aggravated attack of diphtheria. Her fauces, tonsils, and palate were covered with diphtheritic membrane which all the usual applications had failed to abate, even temporarily, the exudate continually re-forming as fast it could be removed. As the case had become grave in the extreme, I urged immediate intubation or tracheotomy, but the advice was rejected. At this moment, happily for the child and myself, the suggestion was made of trying Prof. E. H. Pratt's idea of peroxide of hydrogen on bovinine. Accordingly, the membrane covering the throat, fauces, tonsils and palate, was generously painted all over with bovinine, immediately followed by sprays of the undiluted peroxide. The chemical reaction between these agents and the septic matter vigorously developed, with a lively effervescence, and at once loosened and detached the entire membrane, which within five or ten minutes was coughed

* Abstracted from *Therapeutische Monatshefte*, May, 1899.

out complete, in a mass that would about fill a teacup. Not the least remarkable feature of the result was that on examination of the dislodged membrane its under surface showed the fibrils or roots by which that formation is known to be interwoven, as it were, with the true tissue, making its removal by the ordinary means so difficult, painful, or incomplete. Here, the membrane was literally eradicated by a bland and easy solution of its attachments, and, when the froth of the reaction was washed out, leaving the more or less raw surfaces not only exposed, but also permeable to the combined antiseptic and reparative powers of the bovine blood next applied. The breathing of the patient became almost normal within half an hour.

The same treatment was repeated hourly for the next twelve hours, keeping the exudate perfectly under control, the membrane but slightly re-forming, and yielding readily, becoming at once dislodged and discharged in small particles. At the end of this time all evidences of continued formation of membrane had disappeared, and the true mucous membrane was sensibly ameliorated.

The patient being greatly exhausted with the disease and protracted want of nourishment—nothing but whiskey having been received in many hours—was on the verge of collapse, when the administration of bovinine by the mouth was commenced, givng a teaspoonful in milk every two hours. Bovinine was also sprayed upon the raw surfaces, with healing effect, every half hour. But at every third hour, the peroxide was added on the bovinine as a precaution against a possible renewal of membrane formation.

Resustentation was now so rapid under the vital nourishment administered that in forty-eight hours from the first treatment the patient was sitting bolstered up and comfortable, having entered on a stage of rapid convalescence. I am convinced that this novel and simple physiological treatment is well worth the attention of the profession.

A. H. Peck, M.D., D. D. S., Professor of Materia Medica, Therapeutics and Special Pathology in Northwestern University Dental School, Chicago, in a paper entitled "Relative Toxicity of Cocain and Eucain," read before the Section of Stomatology at the fiftieth annual meeting of the American Medical Association, Columbus, June, 1899. arrived at the following conclusions:

1. The action of cocain is inconstant; one never knows whether the symptoms occasioned by like quantities of the drug, in animals or individuals, under like circumstances, will be similar or dissimilar.

2. The action of eucain is constant. The symptoms occasioned by the use of like quantities in animals under like circumstances, and so far as my experiments have gone, in different individuals also, are the same.

Beta-Eucain as a Loca Anæsthetic.—(By George G. Hamilton, F. R. C. S., Eng. and Edin., Assistant Surgeon to the Royal Infirmary; late Surgeon to the Northern Hospital, Liverpool.) For a considerable time past I have been trying various local anæsthetics, but the results obtained by eucain "B" are by far the most satisfactory. With cocain one has always had the fear that cardiac or other dangerous symptoms might result. Then with eucain "A" or the first eucain which was used, the results were not at all reliable and the patients complained of much burning sensation or of absolute pain afterwards. In eucain "B" the surgeon seems to have in every respect a most satisfactory local anæsthetic, and when one thinks of the dread which many people have of chloroform or ether, and of the number of deaths which are constantly reported in the medical journals as occurring therefrom, it is a great boon to be able to conduct even major operations and to assure the patients that at least there is no danger to life and no fear of suffering from sickness or other disagreeable after-effects.—*The Lancet, London, August, 26, 1899.*

Chinese Remedy for Amenorrhœa.—Professor Hirth *(Muench. Med. Woch.,* June 6, 1899) was for two years superintendent of the European custom-house at Chung King, the metropolis of Western China, Mongolia and Thibet, where his attention was called to the Tang Kui root, which has been been used for many centuries in China as a remedy for menstrual disturbances. He and others have been testing it, and he is strongly inclined to believe that it is the long-sought specific for amenorrhœa without abortifacient properties. Acting as a general tonic, it appeared to bring on the flow at the correct period, besides increasing it and making less severe the pre-menstrual pain. The refined extract, as prepared by Merck, is called eumenol.

Treatment of Prostatorrhœa by Prostatic Substance.—Oppenheimer *(Berl. Klin. Woch.,* No. 15, 1899; *Therap. Gas.),* led thereto by the published reports of the excellent results of organotherapy, has been administering prostatic substance to patients suffering from non-gonorrhœal prostatorrhœa. He notes as a result a rapid and permanent cure. The treatment is contra-indicated by the presence of the gonococci. The dosage and method of preparation are not mentioned.

RETROSPECTIVE DIETETICS.

The White Versus the Yolk of Egg as a Food.—Dr. Gerald Bertram Webb, in a communication on the above subject to the *Medical News,* March 25, 1899, remarks that in many recent works on medicine it is recommended to give patients yolks of eggs to keep up their nourishment, but a little knowledge of physiological chemistry will show that it is a mistake to give the yolk preference over the white. The nitrogenous parts of the egg-contents are albumen and globulin, both easily digested and assimilated. The fatty substance which predominates in the yolk is mainly lecithin. This fat, while undergoing digestion, is partially converted into a poisonous product called choline, which under certain conditions may become absorbed and give rise to "biliousness." The writer has repeatedly found that a patient made "bilious" by one whole egg, can take a dozen raw whites daily without discomfort and greatly to his advantage. An excellent way to take them is to add a little salt, red pepper and lemon juice to three whites in a glass, but these condiments are not always necessary. Infants will often do well on them when dissolved (not beaten) in water, and a little sugar of milk added. It should be remembered, however, that the egg-globulin does not dissolve in the water, but is precipitated and should be separated by straining.

If a weakly patient on waking takes two whites of eggs his appetite on getting down to breakfast is greatly benefited.

Banana Flour.—According to the *Chicago Record* of April 22, 1899, a very nutritious and valuable flour called "Bananine" is prepared. With a view of making more use of this as a cheap and successful food France has sent a commission to the United States and Central America for the purpose of studying the banana industry in the country where this fruit grows most freely. Mr. Charles Patin, of Belgium, has also been investigating the subject and has come to the conclusion that bananas are destined to produce an increasingly valuable cheap food for the working classes in Belgium. It is easy of digestion; the fresh fruit or the flour is particularly well suited for the use of delicate persons. To obtain the flour, the fruit when ripe is peeled and cut into thin transverse slices, which are then completely dried in the sun or a furnace, and in this condition are ground to a powder. From this flour delicious bread and cakes may be prepared, and at a far cheaper price than is demanded for wheat flour.

Purification of Potable Waters With Peroxide of Chlorine.—The process recently invented by Bergé, of Brussels, by which peroxide of chlorine, formed by the action of sulphuric acid on potassium chlorate, is used for purification of water, has been applied in Belgium on a small scale, with perfectly satisfactory results *(Sem. Méd.,* July 19; *Jrnl. A. M. A.)* It is also being tried at Liège, and a committee from the French Public Health Department has been investigating it to determine its practicability for general usue. The report of the committee is extremely favorable in every respect, although it advises waiting for longer experience with the system before introducing it on a large scale. To prevent danger of explosions the acid is diluted and cold. An aqueous solution of the peroxide is used, and a current of air forced across it carries off any gas that may form. It not only destroys pathological germs in the water, but oxidizes the organic matters in a most remarkable manner and generates ozone, which also assists materially in the purifying effect. A disadvantage of the process is that the peroxide must be in excess in the water, which gives it a peculiar

taste, like Javelle water, and stains it yellow. But the peroxide soon spontaneously vanishes—four hours—indicated by the disappearance of the taste and stain, or by tests with starch water and potassium iodide, and the vanishing process can be hastened by passing the water over coke, when it is at once ready for use. Another disadvantage is that the organic matters must not be too abundant in the water, or too much peroxide would be required; hence the process demands the previous filtration of much contaminated water. The expense for 3 grammes of the chlorate, which produces 1 gramme of the peroxide, sufficient to purify 1 cubic meter, is about $0.0006.

Nutritive Value of Petroleum Emulsions.—As was long ago declared upon chemical grounds, petroleum, vaseline, paraffin, etc., are absolutely unassailable by any of the digestive fluids, and yet a large vogue has of late years been given to various petroleum emulsions as substitutes for cod-liver oil, chiefly by ingenious and unterrified advertising (*Med. News*). Robert Hutchison has tested the question physiologically by administering an emulsion in varying doses to a number of persons, the fat content of whose stools had been carefully ascertained, and then collecting their fæces and extracting and estimating the additional fatty matters. In every case he succeeded in recovering within a few grammes—in some cases to the last gramme—of the amount of petroleum administered by the mouth; so that the nutritive value of the emulsions is absolutely *nil*, and as substitutes for cod-liver oil they are impudent frauds upon public and professional credulity, in spite of the array of expert testimonials so skillfully paraded by "Terralene" and others of its class.

The Place of Artificial Foods in Infant Dietetics.—According to Charles Godwin Jennings, in a paper on "The Problem of Infant Nutrition" (*Med. Age*, June 10), the principal foods in the market may be divided into three classes: 1. The farinaceous foods. 2. The malted foods. 3. The milk foods.

Comparing the analyses in round numbers of three of the most frequently used farinaceous foods with the cereals—wheat, barley and oatmeal—it will be seen that these foods differ in no material way from the cereals. Comparing their cost, it will be found that one pound of Imperial Granum costs on the market seventy-five cents, the best cereals from five to eight cents. Critical examination shows them to be partially cooked, convenient, but very expensive cereals.

Analyses of the malted foods (Mellin's Food, Horlick's Food) show them to be cereals changed somewhat in their composition, the chief change being the transformation of the insoluble starch into soluble glucose. The fat of the cereals has been mostly removed by the process of manufacture. The addition of one of these foods to milk is practically but the addition of a soluble carbohydrate. Mellin's Food costs on the market $1.25 per pound, milk sugar twenty cents, cane sugar five cents. While one of these foods may be a useful carbohydrate, it must be considered a very expensive one.

The milk foods (Nestle's Food, Malted Milk) reveal what they are by the study of their composition—chiefly carbohydrates, soluble and insoluble, with more fat than the other classes.

Glancing over the analyses of these foods and the analyses of them as they are prepared for administration, the most palpable defect in them, as compared to the perfect infants' food—woman's milk—is the serious reduction in the fat percentage. Fat is essential to tissue building, and to the absence of fat in these foods can be attributed the rickets and other nutritional defects that so frequently attend their injudicious use.

The practicing physician finds that sometimes, in difficult cases, or for the sake of convenience, they can be given alone or added to milk with benefit. When so used, with a full knowledge of their composition and nutritive value, they may replace the cereals in the latter months of the first year, but they cannot be what is always claimed for them—a perfect substitute for mother's milk.

Diet in Acne.—The well-to do (Dr. Jackson, in "Manual of Diseases") are prone to eat too much, and it is remarkable how rapidly their acne will improve by reducing their diet to the simplest elements. In many of them a milk diet—provided milk agrees with them—will accomplish a marked benefit. On the other hand, says the Columbus *Medical Journal*, many young girls almost starve themselves, under the mistaken idea that a low diet will give them a fine complexion. Nothing could well be less true than this. Especially is there a prejudice against butter. The old explanation that skin eruptions were mainly due to the use of too much butter still remains absolutely true for most non-medical people, and even for some medical men. That butter should be used freely, and that cod-liver oil and iron are the only drugs required in many cases, as Dr. Jackson insists, would to these good old conservatives seem rank heresy. It is evident that more definite ideas as to the diathesis that underlies the etiology of acne have been acquired, and that the dietetic management of it, rather than any empiric use of vaunted specifics, constitutes the most modern therapeusis of this extremely frequent and bothersome condition.

Constipation Produced by Oatmeal.—Dr. Geo. J. Munroe *(Lancet-Clinic)* believes that, although oatmeal can be eaten with impunity and in large quantities by out-door laborers, it should be sparingly partaken of by persons of sedentary habits. He has noticed particularly that it produces constipation in the aged. On trying oatmeal himself, eating it three times a day, before the expiration of the first week he was constipated; before two weeks had passed he had to take cathartics and an enema to have an action. He stopped the use of oatmeal and began eating freely of fruits and vegetables. It was three or four weeks before his bowels got regular again.

To Render Milk Digestible.—Milk which is not well borne may be rendered digestible by boiling with a little eichel cacao; one to three teaspoonfuls of cacoa to one-half liter of milk is sufficient. The cacoa is in too small a quantity to cause constipation. Milk so prepared will be borne where milk and cognac or milk with some aromatic would be rejected. Eichel cacao is a preparation of cacao deprived of its fatty matter and mixed with an infusion of roasted acorns, a little sugar and meal.

Medicinal Properties of Onions.—Onions are a kind of all-round good medicine *(Winnipeg Lancet)*. A whole onion eaten at bedtime will, by the next morning, break the severest cold. Onions make a good plaster to remove inflammation and hoarseness. If an onion is mashed so as to secure all the juice in it, it will make a most remarkable smelling substance that will quiet the most nervous person. The strength of it inhaled for a few moments will dull the sense of smell and weaken the nerves, until sleep is produced from sheer exhaustion. It all comes from one property possessed by the onion, and that is a form of opium.

Food Adulteration.—The *Journal of the A. M. A.* mentions a curious form of "adulteration" of food as having been created, so to speak, in the British Parliament very recently. A most extraordinary clause was introduced in the new Food and Drugs Bill, making it illegal for oleomargarine to contain more than 11 per cent. of genuine butter. This strange provision was defended on the ground that if more than this proportion of butter is added to the oleo "brew" it interferes with the simpler tests of the official analysts and renders its distinction from butter quite difficult. In short, the public are not to be allowed more than a certain standard of goodness in their food, for fear of inconveniencing the government analysts. The question at once suggests itself, if neither the taste of the consumer nor the tests of the chemist can detect any difference between margarine and butter, and they are both equally wholesome—as most experts are agreed—why legislate against the former in the interests of public health? In point of fact, most of this legislation, in both England and America, is a political sop to conciliate the farmer vote—wherefore the government summoned its irrational majority and drove the offensive clause through, in spite of the vigorous criticism of the House.

Treatment of Rachitis.—According to L. Boorse *(Clinical Review*, May, 1899), diet is first in importance in the treatment of rachitis. If the infant is breast-fed, analysis of the mother's milk should be made, and, if found deficient in quality and not susceptible of improvement, cow's milk, properly modified, should be substituted. In infants artificially fed, proprietary and other foods containing an excess of carbohydrate and deficient in fat and proteid should be stopped, and modified milk adapted to the age and digestive power of the infant given instead. Infants

who have passed the nursing period should be put upon a diet rich in proteid and fat.

Cod-liver Oil, as a Nutrient, Is of Undoubted Value.—It is preferably given in the form of an emulsion, and should be administered in small and frequently repeated doses. The lime-salts may be given; also phosphorus, in the dose of 1-200 grain dissolved in olive oil or cod-liver oil, three times daily. Iron and arsenic are indicated where there is marked anæmia.

The Prophylaxis of Beriberi.—Berberi, according to the *Philadelphia Medical Journal* of May 13, 1899, has come to be looked upon as a multiple neuritis, the origin of which remains undiscovered. It has long been thought to be due to some deficiency in the food, or possibly to be a form of intoxication, and improvement has usually followed change in diet. Practical confirmation of this view is afforded by the recent experience of a French army medical officer in Siam, who observed a severe epidemic brought to an abrupt termination by the addition of a generous amount of fatty matters to the dietary. Some weeks later an even more severe epidemic among the inmates of the penitentiary was similarly influenced by a like regulation. It has further been found that berberi has not reappeared in the Japanese navy with its previous frequency since a rearrangement of the naval ration. The disease may thus be compared with scurvy, both being preventable along corresponding lines.

The Vomiting of Pregnancy.—Dr. John P. Dow *(Mass. Med. Journal)* says that in mild cases of the vomiting of pregnancy, when medication is not desirable or feasible, he is very fond of following an old German custom. He advises the patient to take a small cup of strong coffee upon waking in the morning—best without sugar and cream—then to remain quietly in bed for an hour.

Report of Seventy-eight Cases of Pulmonary Tuberculosis Treated With Watery Extract of Tubercle Bacilli.—A report of 78 cases of pulmonary tuberculosis, treated at the Winyah Sanitarium, at Asheville, N. C., in 1898, with watery extract of tubercle bacilli, by Dr. Karl von Ruck, appears in the February number of the *Therapeutic Gazette*.

The tubercle bacilli are filtered out of the rapidly growing and highly virulent culture. After washing with distilled water for the removal of the remains of the culture fluid, they are dried in the vacuum dessicator. Next they are powdered in an agate mortar and then extracted with sulphuric ether. This extraction removes the fats. They are again dried and powdered as before and their further extraction takes place in sterilized distilled water over a water bath with a temperature of 120° F. The proteids becoming dissolved in the distilled water, the fluid is then decanted and filtered through porcelain, when finally the amount of proteids is determined and the preparation standarized to a certain percent.

He treated with his watery extract 20 cases in the early stages, all of which recovered, with an average gain of 11 pounds in weight, and subsidence of all symptoms.

Of 37 cases in a more advanced stage 27 recovered, 7 were greatly improved, 3 improved, and none grew worse, gaining on an average nearly 13 pounds each.

Twenty-one cases in a seriously advanced stage were also treated, of which 3 recovered, 9 were greatly improved, 7 were improved, only 2 grew worse or died, there being an average gain in weight of 10½ pounds each.

Full directions are given for the use of the watery extract, the beginning dose being 1-1000 of a milligram, and this is gradually increased to 5 milligrams. There are three solutions, No. 1 containing 1-000 of one per cent. No. 2 1-10 of one per cent. and No. 100 containing 1 per cent. of the anhydrous extracts.

The Diagnostic Value of Odors in Medicine. (Translated by T. H. Pritchard, M.D., Monroeville, O).—Up to the present, physics has not given us a treatise on olfactics as it has done on acoustics and optics; therefore, the facts gathered by the organ of smell will be condemned to empiricism.

A praiseworthy attempt has been made by Dr. Monin, in France, to place this branch of symptomatology on a firm base, yet it has been but little used in practice.

In order to appreciate the pathological odors one should know the physiological ones well, and one should have the olfactory sense well developed and educated to distinguish them from each other. Finally, to teach them to others they must necessarily be compared with common and well-known odors of other sources.

Some writers have attempted to compare them with certain perfumes or drugs and have ended by making themselves misunderstood. Therefore, on account of these difficulties, olfactory researches in symptomatology have not attained a classification and a scientific value, every surgeon forming his diagnostic criteria according to his personal experience. Yet there are certain odors which are easily recognized and in certain cases are of positive diagnostic value.

In icterus the sweat smells of rancid fat. In certain surgical affections of the intestines, accompanied by fermentation, the fæces and flatus smell of putrefaction. Decomposing pus also smells of putrefaction. Pus pockets which are near to and possibly not communicating with the intestine smell of intestinal gases and fæces. Whoever has operated on a perieneal abscess will not forget the terrible stench of such a pus pocket. Moist gangrene also exhales a characteristic cadaveric odor. Some have compared the odor of the pus of osteomyelitis of the vertebræ to that of water in which bones have been macerated. The urine of purulent cystitis has a characteristically ammoniacal odor. In a similar manner the breath of uræmic subjects and gangrenous tissues with urinary infiltration smell musty. Some cases of poisoning are recognized by their odor; thus that by alcohol is distinguished by the vinous odor and that of hydrocyanic acid by the odor of bitter almonds.

Diabetics who have become comatose from acetonic poisoning exhale an odor resembling that of ripe fruit or chloroform. In penetrating wounds of the abdominal cavity a fæcal odor leads one to fear a wound of the intestine, the odor of urine one of the bladder. The vaginal secretions in a woman with ulcerating uterine cancer are detestibly putrid, whence the name, fetid hydrorrhœa. A similar odorousness is noted in those with pulmonary gangrene.

The vaginal secretions of women with vesico-vaginal fistulæ smell of urine, those with recto-vaginal fistulæ of faeces. The breath of patients with large and inveterate bronchiectasiæ has a garlicky odor and those with carious teeth a nauseating smell. Those suffering from ozena have a breath which is absolutely cadaverous. These examples might be multiplied, but as they cannot be described so as to be clearly comprehended it is better to leave them unmentioned.

This chapter is extracted from a very excellent Italian work which is quite unique in its way, "Instituzioni di Semiotica Chirurgica", by Dr. G. Parvalecchio, a surgeon of the Roman hospitals. It might better be called a work on surgical diagnosis. It is particularly strong in the chemical and microscopical parts. Clinically, it is somewhat different from what one expects to find in such a work. It is a very excellent handbook, however, which is written in a scientific spirit.

Error of Sex as a Ground for Divorce.—Neugebauer (*Ctlbl. F. Gnaek.*, May 6, 1899) has collected reports of no less than fifty cases in which divorce was granted on account of an error in the sex of one of the contracting parties. It seems incredible that such a mistake should occur so often, but the conformation of the genitals of some of these hermaphrodites was such as to deceive medical men who could not in some instances agree upon the sex of the individual, even after an examination. One remarkable case is recorded in which a male hermaphrodite had successively three husbands, and it was only after she, or rather he, had give a venereal disease to the third husband that the latter applied for a divorce. In forty-six out of the fifty recorded cases a man had married a male hermaphrodite. In one case the sex of the parties is not given and in three instances women married female hermaphrodites. In one of these instances the supposed husband later became pregnant, and was delivered of a full-term child. There are numerous instances in which a matrimonial engagement has been broken on account of the discovery that the parties to the agreement were of the same sex.

MISCELLANY.

—The Royal College of Surgeons of England will celebrate its centenary next year, and preparations are already being made looking forward to the event.

—In difficult diagnosis between measles and scarlet fever Dr. Donkin points to the fact that the region of the nose is always occupied by eruption in measles and the lips peel in scarlet fever.

—The suggestion (first made, we believe, by the *Richmond Journal of Practice*) that the word intervention be substituted for "interference," when speaking of operative or surgical treatment, is an excellent one, and no doubt will be generally adopted.

—The Midwives' Bill, which was introduced by the Right Hon. J. B. Balfour, has been defeated in Parliament, having failed to pass its second reading. A large portion of the members of the medical profession of Great Britain was dissatisfied with its provisions.

—The Conference of Advocates of the Paris Court of Appeals has discussed and decided affirmatively the question: Does the publication in a book by a medical man of observations made upon a person treated in a hospital constitute a violation of professional secrecy?

—It has been computed that one person in every 800 is blind to the X-rays. That is to say, when looking through the fluoriscope, they are utterly unable to observe the bones of the body, coins, or any other object which is clearly distinguishable by the ordinary observer.

—It is reported that the government has engaged a physician for the employees of the Chicago post office at a salary of $1,700 per year. He will be at the main office to examine employees who report themselves sick. The government expects to more than make it up in salaries saved.

—Aluminum has been put forward as a fuel, not for warming houses or public places, but for obtaining very high temperatures. Mixed with iron oxide, silica, etc., as combined with oxygen it produces a temperature in a crucible of 3,000 degrees C., and the mixture can be ignited with a match.

—For the chronic ulcers of tertiary syphilis, Professor Hearn finds acid nitrate in mercury, one part to sixteen parts of water, applied every third day, the best stimulating caustic. It not only destroys the hopelessly diseased tissue, but seems to exert a distinct alterative influence in the less diseased area.

Dr. Edward Murphy, of New Harmony, Ind., has given $42,000 for the town's public library. Several years ago he provided $30,000 for the erection of the library building. The doctor is eighty-six years old, and desires he says, to dispose of his property without the interference of courts and juries.

—Dr. Lassellette has just been sentenced, in Paris, to two months' imprisonment for "imprudent homicide." The doctor had operated upon Madame T. for a voluminous fibroma of the uterus. A few hours after the operation the patient died. The autopsy revealed a pair of hemostatic forceps in the cavity of the uterus.

—The medical college founded in 1883 by French Jesuits at Beyrout, Turkey, has recently been recognized officially as the peer of the French colleges, its diploma entitling the holder to practice anywhere in Turkey, France or its colonies. The *Journal de Médecine* protests most energetically against this order of things.

—Kussmaul, of Vienna, recently declined to sign the requirements provided for the examination to practice medicine, because the students were not taught the practical use of hydrotherapy and hygiene, which he regards as the most important, as well as the most neglected, department of medical teaching and practice.

—The New York Chamber of Commerce, through a committee, has raised $100,000 as a memorial fund to the late Colonel Waring. The interest on this sum will be given his family and at their death the principal will be used to endow a chair in Columbia University, to be known as the Waring Municipal Chair.

—The Lord Mayor of London recently gave a dinner in aid of the London Hospital, which resulted in the collection of $375,000 and promises of over $20,000 annually.

—The London Cancer Society has commissioned Dr. A. E. Duffy to proceed to the United States for the purpose of collecting data regarding cancer, and especially to study the investigations being made at Buffalo. A prize of $50 has also been offered by the society for the best essay on cancer.

—Governor Roosevelt has signed an amendment to the Civil Code which forbids a physician to give any information concerning the mental or physical condition of his patients, either before or after the death of the latter. Hitherto the law has permitted a physician to testify concerning the physical condition of a person holding a policy of life insurance.

—A recent communication to the Paris Académie de Médecine asserts that countries in which the upper layers of the soil, the mud and river beds, contain a large proportion of lime, are exempt from malaria, and suggests that malaria might possibly be banished from localities where it prevails by artifically incorporating lime with the superfical layers of the soil.

—Alvan R. Johnson, Esq., of Brooklyn, has presented to the trustees of the Long Island College Hospital securities worth $25,000 for the endowment of a fellowship in the department of pathology, to be known as the Van Cott Fellowship, in honor of Dr. Joshua Van Cott, who will during his lifetime select the incumbent annually. The income will be about $1,250.

—*La Nature* tells a story about a dog belonging to a well-known English dentist, which was scarcely able to feed itself, owing to loss of teeth. It has been fitted with an artificial set (including four canine teeth and as many molars) mounted on a plate in the ordinary style, and now eats meat and even gnaws its bones without difficulty, so as to have gained considerably in weight.

—Dr. Calmette, chief of the Pasteur Institute at Lille, and well known by his researches into the question of immunity from serpent venom, lately discovered an improved process of manufacturing alcohol, from which he has realized the sum of 250,000 francs. This sum he has handed over absolutely to the Pasteur Institute, although he is not a wealthy man. The gift is regarded as a protest against the recent action of Dr. Behring.

—Dr. W. Gill Wylie, chairman of the Medical Board of the Board of Education, has begun an agitation for a reform of the present school system as it applies to girls, especially those between the ages of eleven and sixteen. Dr. Wylie says: "The danger resulting from the amount of study required at present is not to the life of the girl, but, coming as it does in the formative period of a girl's life, the evil effects are bound to be manifest in her children."

—An English observer, Dr. Tucker Wise, is of the opinion that in many instances diseased caged birds, such as canaries, communicate tuberculosis to a serious extent among human beings. As about 400,000 canaries are reputed to be sold every year in the United Kingdom, and as it is stated that tuberculosis is one of the most common diseases of birds, it does not seem unlikely that the canary may have considerable influence in the distribution of tuberculous infection.

A literal translation of the "Thousand and One Nights" into French has just been completed by a young physician, Dr. Mardrus, of Marseilles, a Mohammedan from Cairo. He is familiar with Arabian lore and life, and also thoroughly at home in Paris, where he completed his education. The combination of Parisian, Arabian and medical knowledge is said to have produced a rare work, as the author has traveled and observed much and had access to many unpublished manuscripts.

—The investigation into the etiology of cancer at the Buffalo Laboratory appears to point strongly toward confirmation of the germ theory of the disease. On the other hand, Dr. Lambert Lack, of London, has recently reiterated positively his belief, founded on late investigations, in the old theory that cancer is orginally a local disease due to a specific injury to the basement membrane of mucous surfaces and allied structures. He also announces the discovery of a prophylactic and curative serum.

ORIGINAL ARTICLES.

BLOOD EXAMINATIONS.

By A. L. Benedict, A. M., M. D.,

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THIS article will not be of interest to the hæmatologist, but possibly to the clinician who wishes to obtain the maximum of practical information at the minimum cost of time.

The question that most frequently arises regarding a patient's blood is as to its oxygen-carrying power, or, in other words, whether the red cells contain sufficient iron in combination as hæmoglobin. In the ordinary secondary anæmias, hæmoglobin and red cells fall in about the same proportion; that is, each red cell contains only a trifle less than the normal amount of hæmoglobin. In essential pernicious anæmia the average individual red cell contains too much hæmoglobin, but the deficit of cells more than balances this excess. In anæmias of which chlorosis is the type, there is moderate failure of red cells and a much greater loss of hæmoglobin, so that each cell is decidedly deficient. Of these three types of anæmia the first is, fortunately, by far the most common, at least in digestive practice, and I have every reason to believe in general practice as well.

There are four methods in common use for estimating the "richness," that is, the oxygen-carrying power of blood.

1. The enumeration of the red cells, preferably by the Thoma-Zeiss instrument.
2. The quantitation of red cells by the hæmatokrit (centrifuge).
3. The estimation of hæmoglobin by color.
4. The indirect estimation of hæmoglobin by specific gravity, preferably by mixing chloroform and benzol till a density is obtained in which the drop of blood will neither rise nor sink, and then taking this specific gravity by a hydrometer.

It will be seen that 1 and 2 estimate cells, 3 and 4 hæmoglobin. The point which we really wish to determine is the quantity of hæmoglobin, and it is perfectly obvious that none of the four methods are direct. Between 1 and 2, most hæmotologists prefer the former, as more scientific. Personally, I cannot comprehend this mental attitude. If we wish to transport grain and inquire as to the capacity of freight cars, which is the more rational statement, that there are so many cars on hand, or that, with no specification of number, there are cars ready whose aggregate capacity is so many bushels? So, in regard to the transportation of oxygen by the blood, I cannot see that it is more scientific to note the approximate number of cells per cubic millimeter, than to state the aggregate volume of red cells which may readily be compared with the normal standard, 50 per cent. At any rate, the hæmatokrit tells us inside of five minutes, at slight strain of the muscles of the arm—and it may just as well be the arm of an untrained assistant—practically what we may learn from the hæmatocytometer in an hour at the least, with much eye-strain, and necessitating either personal attention or the services of a well-trained, sharp-sighted and thoroughly conscientious assistant. Some practical hints as to the use of the hæmatokrit may be allowable, in addition to those which accompany the instrument. Put the centrifuge on a shelf, so that if anything breaks, the enormous centrifugal force may be exerted above the head of the operator. Always swing both tubes and average the results. A difference of more than 2 per cent. indicates imperfect tubes or faulty technic. Blow the blood from the tubes immediately after reading, to avoid coagulation. Clean the tubes first with potassium hydrate solution, then with distilled water, introduced through a funnel connected with the capillary tube by a rubber union. The latter may be "milked" if the fluids do not flow readily. Dry by blowing air through the tubes, by means of a bulb. If the blood does coagulate, use a coarse human hair as a stilette. Filter paper or absorbent cotton will prevent the introduction of foreign matter into the tubes during the cleansing process.

The main trouble with the hæmatocytometer, not to mention the delicacy of manipulation and tedium of counting, is the indistinctness of the fine lines when the chamber is filled with blood. To obviate this I have adopted the expedient of drawing off the lines from the dry micrometer-slide, by means of a camera lucida. If the same piece of paper is then used for blood counting, taking pains to place it at the same level and in the same relative position to the microscope, the lines drawn on the paper will appear quite distinctly. I prefer heavy red lines on green paper, shading the paper, as by placing a large book before it. Marks should be made to correspond to the standard of the microscope, so that the paper may be placed in exactly the same position for each examination. This is necessary, as the tracing of the microscopic squares is much distorted when the paper is viewed by the naked eye, and the distortion is not the same for all parts of the field.

The estimation of hæmoglobin by color is so notoriously inexact that I have never used it in practice. The much-vaunted chloroform-benzol method I have used to some extent. I wish to call attention to some sources of error. First of all, it is necessary to get a reliable hydrometer, the ordinary urinometer being scarcely delicate enough. The mixing must be carefully done and yet rapidly, on account of change of specific gravity by evaporation. I found it quite impossible to weigh the vessel containing the mixture, as evaporation changed the weight more rapidly than a balance could be struck. Notwithstanding this, I should prefer the specific gravity, as calculated from the weight, as the error could be kept within two or three centigrams for 20 cc. of the mixture. In using Hammerschlag's tables to convert specific gravity into hæmoglobin-content, it must be remembered that extreme degress of plethora and anæmia, marked fluctuations of the hæmoglobin-content of the average red cell, extreme leucocytosis, leucocythæmia of most grades

and some other conditions, interfere with the accuracy of the approximation. It is significant that these interferences represent precisely the conditions in which the hæmoglobin cannot be deduced with clinical accuracy from the hæmatokrit—that is to say, the very cases in which a direct estimation of hæmoglobin is necessary. A test which is only reliable when it is not necessary will scarcely appeal to the busy clinician.

The method which I should prefer for the estimation of hæmoglobin is the following: Withdraw about 10 c.c. of blood by means of a breast pump. If the shoulder is used, the patient feels neither pain nor faintness. Weigh the blood and have the proportion of iron estimated by a chemist, after incineration. As all of the iron is in combination as hæmoglobin, the latter can be easily calculated. I am endeavoring to modify this method so as to substitute treatment with acid for incineration. If this could be accomplished, the estimation by the clinician would be not much more difficult than the estimation of acidity of stomach contents, except that frequent standardization of the titration solutions would be necessary.

For most cases of anæmia the hæmatokrit method, checked by the inspection of a stained specimen (see below) is sufficient for clinical purposes, although it certainly lends dignity to a report to mention the percentage of hæmoglobin, even if it is well known that the method is inaccurate. In all methods of investigation allowance must be made if the patient has been vomiting frequently, or has taken an abnormally small quantity of liquid, so that the blood has become concentrated.

Beside estimating the oxygen-carrying power of the blood, we wish usually to know the approximate number of leucocytes, as indicating the glandular and phagocytic power of the blood, and to note any cellular peculiarities which may indicate special blood diseases. For estimating the number of leucocytes—which should be about 7,500 per cubic millimeter—a special pipette is furnished with the hæmatocytometer, but it is now customary to use the regular pipette for red cells and to count the entire microscopic field, whose area can be estimated by measuring the diameter by means of the ruled micrometer slide. If Toison's fluid is used, the white cells are stained quite a dark purple.

℞	Gentian violet	.025
	NaCl	1.000
	Na_2SO_4	8.000
	$C_3H_5(OH)_3$ (glycerine)	30.000
	H_2O	160.000

Some observers mention the use of the hæmatokrit to determine the number of white cells. While it may readily be shown by microscopic examination that nearly all of the white cells accumulate between the red cells and the plasma in the capillary tube, and while the last drop from the tube may be used if it is desired to get a large quantity of leucocytes for differential examination, it is not possible to detect, much less to estimate, anything less than an enormous leucocytosis. For instance, a leucocytosis in which twenty or more white cells are found in every field instead of two or three, will not give a visible band in the hæmatokrit tube. For practical purposes, in the diagnosis of pus, hemorrhage, etc., the inspection of the stained specimen of blood is sufficient. A digestion leucocytosis cannot be determined in this way, but then the presence of digestion leucocytosis is not of much practical importance. If absent, it indicates, not cancer, nor any other gastric disease in particular, but simply some condition in which digestion does not take place. It is usually both simpler and of more diagnostic value to examine directly to determine whether digestion does or does not occur. The presence or absence of leucocytosis, if the question can be unequivocably answered from the inspection of the stained specimen, is of value in determining for or against operation, as in epityphlitis or other possibly septic diseases. But, other symptoms and signs must be duly weighed, and operation should not be decided against unless all are favorable.

While the examination of stained blood specimens is of especial value in diagnosing specific blood diseases, such as pernicious anæmia, the various leucocythæmias, etc., these conditions are comparatively rarely encountered. Little need be said regarding them, for the reason that we have to deal with distinct pathologic conditions. A fair sample of the diseased tissue, the blood, is right before our eyes, and diagnosis, just as at necropsies, is purely a matter of familiarity with normal and abnormal anatomy. While it may be said that the general practitioner will rarely meet with a genuine blood disease, it is only by the routine examination of blood that rare cases of this nature are identified. The man who does not examine blood—or have it examined by some one else—is bound to miss cases of interest and profit, just as diabetes will be missed if one is careless about making routine analyses of urine.

The preparation of a specimen of blood for careful microscopic examination includes four processes:

1. Mounting. The tip of a finger or the lobe of an ear is washed first wth soap and water, if necessary, then with alcohol, ether, or a mixture of the two. A rather deep prick is made with a special lancet, one nib of a pen or even a pin or needle. A drop of blood about 1-16 inch in diameter is taken up on one cover glass and another is pressed over it, and the two are rapidly slid apart. Do not use pressure in drawing blood, or an artificial leucocytosis will be produced.

2. Preliminary treatment of the blood film. Raw dried blood will not stain properly, and several methods are in vogue to secure staining effects. My own opinion is that these all serve to free the blood cells from fats, but the accepted theory is that, in some unknown manner, the protoplasm of the cells, especially the nuclear granules and chromogenic parts, are subjected to a mordant action.

A. By heat. Various thermostats may be used, or a blood oven may be improvised from a tin can or quinine box, with a shelf of tin or wire gauze at about the middle. A hole is cut in the top of the can for a cork, through which a thermometer is inserted. A good Centrigrade thermometer, long enough so that all temperatures from those used for digestive experiments upward may be read

above the cork, can be bought for about a dollar and a half. The bulb of the thermometer should be just above the shelf. The temperature of different parts of different ovens varies so much that the proper heat must be determined by experiment. Dr. Cabot advises running the temperature up to 150° C. and then letting it run down as fast as it will, after the heat is removed. In one that I made from a tin can, it was found best to run the temperature only to 88 or 90° C. After turning off the gas, the temperature would continue to rise for a few degrees. If the red cells stain too red, the cooking has been insufficient; if too pale, the temperature has been too high.

A'. A strip of brass or copper is held in some stand so that one end is in a Bunsen flame. After a few minutes any particular part of the strip has an even temperature. Water is dropped on the strip to determine the point at which boiling—not merely evaporation—occurs. Using this point as the hotter limit, the mount of blood is placed on the strip, film side down (all hæmatologists insist on this; I don't know why), and allowed to cook for five to fifteen minutes.

B. Alcohol-ether. The blood mounts are placed in wide-mouthed bottles containing equal parts of alcohol and ether and kept there for from thirty minutes to several months, according to convenience. Thirty minutes is the minimum; especially brilliant stains may be obtained from immersion for several weeks. Usually the stain is applied after a few hours.

C. Formaldehyde method. The blood mount is placed for one minute in a solution containing 1 per cent. of the 40 per cent. formaldehyde solution, distilled water up to 10 per cent. and alcohol up to 100 per cent.

While all hæmatologists with whom I have corresponded prefer the method by heat, my own experience is that this is the most tedious, the most difficult of adjustment, and the one that affords the poorest stain. For all cases in which haste is necessary, method C is to be preferred. If blood is sent from a distance, method B is to be chosen, though dry blood mounts will keep for several days without any treatment whatever. A simple and convenient portable blood outfit consists of a bicycle oil-can filled with alcohol-ether for cleansing the skin, and a pin box or other small metal box with a few cover glasses, a little absorbent cotton and a bent pen.

3. Staining. A. Ehrlich-Biondi triple stain. I omit the formula, as it seems to require some special skill to obtain a good mixture. The reds should stain a clear yellow, but with stains of this degree of excellence it may happen that the leucocytes will be very indistinct. The stain that I am now using, though recommended after a test by the highest authority, leaves the leucocytes almost invisible, even after forty-five minutes' immersion. With a previous stain the reds had a decided pink tinge, but the esinophiles appeared more distinctly, and it was easy to make a differential count. With this earlier stain I found that heating, as in the examination for tubercle bacilli, made the stain brighter. The present stain is neither better nor worse with this expedient or with long or short exposures.

B. Eosin-methyl-blue. After ten seconds' immersion in about 1 per cent. watery solution of eosin, the cover glass is washed and methyl blue, saturated watery solution, is applied for about one minute. The excess is washed away. For ordinary examinations this is a simple and excellent stain, eosinophiles especially showing well. It does not, however, bring out the details of leucocytes in case discriminating study is necessary. The pale triple stain may be reinforced by following with the methyl-blue solution for half a minute, but the same objection holds.

4. Mounting. The most convenient mounting medium is Farrant's acacia mucilage, with a small amount of thymol or chloroform added. If this is used it is unnecessary to dry the cover glass before mounting, and if any excess or deficiency of stain is found, the cover may be dismounted and rewashed or restained. After some weeks, however, mucilage mounts become faded. For permanent mounts the cover glass should be dried at some distance above a source of heat; the glass slide should also be heated to drive off moisture, and balsam should be employed.

5. Labeling. The name, date, method of staining, etc., should certainly be stated. A second square of paper may conveniently be used to record the results of a differential count. Mounts thus labeled may be filed for reference.

6. Examination. For detailed, and especially for preliminary study of leucocytes, an oil immersion lens should be used. For routine examinations it is much better to use a high-power dry objective, as so much larger fields can be seen at one time. While some advise examining under a flood of light, I prefer to use as small an aperture as possible and to focus the condenser to the maximum of distinctness. A mechanical stage is a great convenience and enables one to refind any particularly interesting field by noting the abscissa and ordinate registered at the side and back of the stage. Perfectly satisfactory counts may, however, be made without the mechanical stage, and it would hardly be worth while to purchase one unless considerable of such work was to be done.

The examination of a properly stained specimen of blood gives a fair idea of the amount of hæmoglobin present. In marked simple anæmias the red cells are pale, and in extreme cases may appear almost as rings instead of discs. In pernicious anæmias the stain is peculiar and uneven, and nucleated red cells are seen. As in regard to an excess of leucocytes, while the presence of nucleated red cells is a sign of serious trouble, it is also a promise of repair of the loss. The nearer the nucleated cells approach to the size of the normal cells the better the omen, nucleated red cells of large size being of grave prognostic significance. Care must be taken to distinguish the nucleated red cells from the small lymphocytes.

Filariæ and malarial parasites are best seen in bed-side mounts of fresh blood, at the hours of activity or paroxysm of the disease. They may, however, be seen in stained specimens. Careless or inexperienced observers may mistake the normal crenation of the red cells or accidental contamination with specks of dirt for malarial parasites.

After several examinations of stained blood with

the same microscope, care having been taken to avoid squeezing leucocytes from the lymph vessels into the drop of blood, inspection of a specimen will enable one to say whether there is or is not a significant leucocytosis. Leucocytosis, in general, indicates one of three conditions, febrile inflammation, sepsis and hemorrhage. The only common fever in which diagnosis is not quite clear without reference to the condition of the blood and which is not marked by some leucocytosis, is typhoid. Unless the system is overpowered by septic poisons leucocytosis is practically always observed. It must be remembered, however, that with fulminating sepsis there may not be time for a leucocytic reaction, and that in cases of great depression sepsis may paralyze instead of arousing phagocytic effort. With these exceptions, and knowing that a condition may probably be septic, the question for or against operation may often be decided by the blood. In the differential diagnosis between genuine epityphlitis—so-called "appendicitis"—and non-septic typhlitis, the blood is especially valuable as a criterion. I would, however, warn against the idea that blood examinations may be used arbitrarily and unreasoningly to decide surgical questions. For example, we may compare cases of epityphlitis and right tubo-ovarian abscesses with equal degrees of leucocytosis. The former demand operation promptly, the latter may be temporized with quite safely, simply because the structures are stronger, less likely to allow peroration into the peritoneum, and more apt to contract adhesions. Of hemorrhages causing leucocytosis may be mentioned menstruation, the leakages of scurvy and purpura, the outbursts of gastric ulcer, etc., Menstrual hemorrhages being usually slight, little leucocytosis results, scarcely enough to cause confusion, in case of marked septic disturbance.

The normal leucocytes may be divided according to maturity into small lymphocytes, containing a large simple nucleus with only a narrow rim of protoplasm; large lymphocytes which are similar, but considerably larger than a red corpuscle, whereas the small lymphocytes are of about the size of the latter or a trifle smaller; polymorphokarytic or multiforminuculear cells, whose nuclei are of various shapes, much contorted and surrounded by a larger amount of protoplasm; eosinophiles which are similar to the last, except that the protoplasm is gathered into distinct dots that stain deeply with acid dyes. These forms may be compared, respectively, to children, adolescents, vigorous adults and senile adults of a mixed population. Just as old cities contain more old men than the new cities of the West, so the blood of old persons contains a relative excess of eosinophiles, while children's blood, on the contrary, contains an excess of lymphocytes. Normal individuals, of whatever age, should show blood whose leucocytes are assorted according to the following scale:

Small lymphocytes ...	20 to 30	per cent.
Large lymphocytes ..	2 to 6	"
Polymorphokarytic ..	60 to 70	"
Eosinophiles	½ to 4	"

The dividing line between small and large lymphocytes is an arbitrary one, and the personal equation enters in to a considerable degree. My rule is to call all lymphocytes small unless they are notably larger than red cells in the same field. The diameter of blood cells varies in different fields according to the pressure exerted in preparing the films and other unknown causes. Nearly all leucocytoses are due to an actual and, of course, relative, increase of polymorphokarytic cells. An excess of lymphocytes indicates immaturity and weakness; thus it may be found in incipient tuberculosis, especially in the young adult, whose blood becomes that of a child. Eosinophilia, on the other hand, indicates senility of blood. In trichinosis it exists in marked degree, as high as 50 or 60 per cent., the total number of leucocytes being taken as 100 per cent. I have found smaller but still abnormal degrees up to 10 per cent in Addison's disease, and up to 5 to 9 per cent. in cases of enfeebled physical and mental power whose origin was unexplained, but was attributed by me to failure of the pituitary, on theoretic grounds. I have seen such eosinophilia disappear, concomitantly with suicidal tendencies, mental hebetude, etc., under attention to digestion and the use of spinal and other extracts, rich in phosphorus compounds of albumen.

It would prolong this paper unduly to attempt to list all the conditions in which blood examinations are of importance. It has been the aim to select a simple technic, applicable for clinical use, and to point out a few general principles and frequently occurring special rules governing diagnosis by the blood. All workers require some manual, such as Cabot's excellent monograph, or the chapters of Simon's or other writer's works on diagnosis in general. Recent advances, as in every progressive branch of medicine, must be sought in current literature.

THE DIAGNOSIS OF APPENDICITIS.

By Frank T. Meriwether, M. D., Asheville, N. C.

THAT appendicitis is not so easily diagnosticated as is thought is a fact patent to those who see much abdominal work. How often are we called in late for an operation when the patient has been treated for other diseases? And it is not always to the physician's discredit, for I recall a case operated upon by me some time ago that had been diagnosticated by the great Pepper, excellent clinician that he was, as indigestion, during a previous attack, but which the adhesions and conditions found showed must have been appendicitis.

The difficulties in diagnosis also explain why certain physicians having larger practices see so few cases, while others cure large numbers by a strictly medical treatment. It is much like the obstetrician who delivers hundreds, or it may be thousands, without a perineal tear. He does not look for them in the right way, or else is not skillful enough to discover them.

There are undoubtedly many cases of appendicitis in which the diagnosis is very clear, the patient himself making the diagnosis, but many cases demand the most profound thought and judgment.

I know I see cases in which it seems almost impossible to make a diagnosis with certainty, though thus far I have not operated unnecessarily. We often say with confidence than an acute, localized pain and tenderness in the right iliac fossa, accompanied with fever and a rapid pulse, after excluding ovarian disease, is very likely appendicular, but so often there is at first no localized pain, or if localized it is not in the right fossa.

In my experience the most frequent seat of pain is at or about the umbilicus. And the temperature is very uncertain, with peritonitis, it being only 98.8° at its highest, with a pulse of from 74 to 80 and good in quality. And this was a case of perforation.

Appendicitis may be confounded with almost anything, and while the members of this particular society are undoubtedly fully able to differentiate in this disease, it may be well to refresh our minds a little. The various diseases of the female sexual organs, particularly those of the right ovary, are all very likely to be confounded with appendicitis.

I believe that in the majority of cases examination of the abdomen, combined with vaginal and bi-manual palpation, will enable one to detect the offending organ and establish a correct diagnosis. The examination of the right fossa is the most important means of diagnosis, or, if from rigidity or tenderness a thorough examination cannot be made, the character of the tenseness of the abdominal muscles.

In my experience in ovarian or uterine trouble, if rigidity is marked, it is general—that is, both recti muscles are involved, while in appendicitis it is the right lower quadrant only. Even during the examination under anæsthesia this one-sided rigidity often remains, and I have seen cases in which the right muscle did not become relaxed until some time after the operation. Also the masses of exudate and pus from the pelvis rarely rise above the level of the anterior superior spine, while in appendicular trouble the tumor, if any, is apt to be above and rather internal, toward the umbilicus.

Ovarian Abscess.—Quite a number of times ovarian abscess has been met with in which the infection comes from the appendix, the end of which is adherent to the abscess wall.

I have met with one case in which an abnormally long and acutely flexed appendix was adherent to the ovary, in which infection occurred, the result of which was an abscess the size of a walnut. Differential diagnosis in this case was practically impossible.

As a rule, however, the history of the case, the character of the pain, vaginal and bi-manual examination, the history of periodicity, and its relation to the menstrual flow, usually clears the diagnosis. The attacks are less explosive than in appendicitis, and the relation between pulse and the temperature is less distorted.

In cases of ovaritis the character of the pain, tenderness not being so marked except upon very deep pressure, the tenderness and pain being low in the pelvis, the history and vaginal examination should suffice. Of course, attacks of appendicitis may be aggravated at the time of the menstrual crisis, as in a case of mine, the excess of blood in the pelvis causing a sub-acute attack of the appendicular trouble in a fibrous appendix.

In acute salpingitis there is often a marked resemblance to acute catarrhal appendicitis, but the history of possible infection, the different kind of pain, the lack of rigidity of the right rectus muscle, and the combined and vaginal examination, should differentiate.

In acute salpinx the examination usually reveals the condition, but if the appendix is at fault, and peritonitis has supervened, the rigidity of the vaginal vault from inflammatory deposit and muscular rigidity make it impossible to map out anything.

Chronic pyosalpinx should be easily differentiated by its history and an examination, a confusion arising only when the tumor is very large, if appendicular, the appendix pointing southwardly, the abscess tending to burrow toward the rectum or vagina.

In extra-uterine pregnancy the history of cessation of the menses, and other signs of pregnancy, the discharge per vaginam, the character of the pain, the relation of the pulse and temperature, and the combined and vaginal examination should reveal the nature of the trouble, though in a case of mine there were no signs of pregnancy and no vaginal discharge. In this case, as in many we see, a positive diagnosis was impossible, but the necessity of operative measures being present in the event of either diagnosis, the patient did not suffer for want of proper diagnosis.

A somewhat rare condition may be mistaken for a chronic appendicitis, but should be easily differentiated. This is a varicose condition of the broad ligament. In it the dull aching pain, always present, no history of an acute attack, no localized pain or dullness over the region of the appendix, and the absence of inflammatory symptoms, should be sufficient.

In a fibroid a mistake might arise, but the history and age, with the examination, should make the diagnosis. Cases have been reported of a twisted pedicle of an ovarian cyst, in which diagnosis seemed very difficult, if not impossible; but the character of the pain is so different that the history and examination, character and rigidity of the muscle, if any, should clear it.

In infection following an early miscarriage, the infection traveling up the right tube and causing local peritonitis, the difference in muscular rigidity, careful examination, no interference with the bowel functions, no vomiting, and the pulse and temperature, should differentiate.

Occasionally peritonitis from a small leaking pus tube will give rise to symptoms simulating appendicitis.

In these cases the muscular rigidity, if any, is more or less general, the bowel symptoms of appendicular disease are not present, nausea and vomiting are not prominent, the history and the pulse and temperature record are not those of appendicitis.

Cancer of the ileo-cæcal region may be mistaken for appendicitis, or *vice versa*. The principal points of differentiation are the age, history, cachexia, temperature record, and careful physical examination.

Pott's abscess should be easily differentiated, but mistakes have often occurred. In fact, I am cognizant of one. In it and nephritic and perinephritic

abscess the lumbar examination will usually show the source of the tumor and pus, and, with the history of the case and the pulse and temperature records, should differentiate.

In nephritic and hepatic colic the relation of the pulse and the temperature are not so distorted as it is apt to be in appendicitis, and it is more likely to be the upper rather than the lower portion of the right rectus which is rigid. The localization of the pain in the right fossa is almost certain to obtain within a few hours in appendicitis.

In nephritic colic the tenderness over the kidney, the history, the very distinct paroxysmal character of the pain, no coating of the tongue, and no bowel symptoms, the pulse being only accelerated, as a rule, during the attack of the pain, the examination of the urine, and the palpation of the abdomen, together with the absence of temperature changes, should make up a diagnosis. In hepatic colic the history of the former gastric disturbance, the icterus, tumor, and the location of the pain and the tenderness, the temperature and pulse records, should in most cases exclude appendicitis.

Typhoid of a fulminating character may be confounded, but the usual prodromata, prolonged fever, possible infection, diarrhœa, excessively high temperature, should distinguish it. The cerebral symptoms of typhoid of this type are apt to be marked. I do not think that appendicitis should be confounded with typhoid with perforation, but I know of two cases of perforative appendicitis in which the diagnosis of typhoid perforation had been made.

The history of a necessary previous illness of two weeks before pain and the symptoms of perforation, for typhoid perforation rarely occurs before the end of or the commencement of the third week, should suffice. Even in a walking case the illness without pain would be noticed. I believe that it is frequent that a narrowing of the ileum from typhoid ulceration may produce symptoms resembling appendicitis, but the history of the manner of the recurrence, not accompanied by fever, with negative palpation, and the history of typhoid fever preceding, and the pulse record, should differentiate.

Ordinary colic, from indigestion or the ingestion of some article of diet, often renders the diagnosis very obscure during the first few hours. The history of the indiscretion in diet, tendency to diarrhœa, constipation being the rule in appendicitis, no tenderness over the appendix, examination showing no enlarged appendix, no temperature, and the rate and quality and character of the pulse, should lead one to make a proper diagnosis. The pain, however, is often of the same character, and it not infrequently is the case that the pulse and the temperature in appendicitis are normal. The following case is one of particular interest in this connection:

A negro boy, aged sixteen years, had what was supposed to be an attack of colic Monday evening, which was relieved by a small hypodermatic injection of morphine. He was advised to take some salts, which he did, with the result that he felt about well the next morning. He had no fever and his pulse was 72. He did his work, which was that of a hostler, the next day, getting around fairly well. On Wednesday night he complained again and was given another hypodermic injection. Still no fever or pulse derangement. Thursday morning he had a little tympany, and quite a little pain, it being most marked about the umbilicus. Thursday noon the pain became localized at McBurney's point. I saw the case that afternoon, at which time the pulse was 72 and the temperature 98.4°; tympany was marked, the tongue slightly coated, some tenderness over the right iliac fossa, total loss of liver dullness, bowels had moved that morning, no nausea, and the patient was fairly comfortable.

An operation made showed a large perforation with free fœcal matter in the abdominal cavity, and about a pint of very foul free pus, no attempt on the part of nature having been made to wall it off. This patient had at no time shown signs of shock, and went off the table with a pulse of 80 and a temperature of 99°.

In differentiating between chronic appendicular disease and tubercular peritonitis the points are the temperature record, the history, and the lesion to be found elsewhere in tuberculosis. No mass is found in tubercular peritonitis, as would be found in chronic appendicular abscess, but the other symptoms may be very confusing. In a case I had some time ago the history was that of recurrent appendicitis, with a temperature pointing toward pus somewhere, but at the time of operation a localized tubercular peritonitis was found, with several enlarged glands containing the tubercle bacilli. There was a sense of resistance in the right fossa, though no distinct tumor was felt.

In intestinal obstruction the temperature is more apt to be sub-normal. There is no history of a previous attack, and the obstruction of the bowel is usually absolute. In one case seen, the diagnosis of appendicitis was made upon the fact that after persistent endeavor the bowels were moved, though the former physician had considered the obstruction absolute, and the operation proved the correctness of the diagnosis.

There is not apt to be a local rigidity of the rectus, and the character of the pain and vomiting and of the tumor, and the temperature record, should show in most cases the trouble to be obstruction.

DETECTION OF SMALL QUANTITIES OF ALBUMIN IN URINE.

By Clifford Mitchell, M. D., Chicago, Ill.

THE writer has been not infrequently astonished at the acceptance by life insurance companies of patients who were under treatment for chronic albuminuria. During the last two years six examinations of the twenty-four hours' urine have been made in such a case, namely, of a man of sedentary habits, over forty years of age. Albumin has never been found absent, and ranges in quantity from a trace to as high as 8 per cent. bulk by the method of centrifugal sedimentation. Pus corpuscles are never entirely absent from the sediment, and cannot be accounted for by symptoms of inflammation of the urethra or bladder. Tube-casts frequently occur in the sediment, at one time as many as eight being found in the sediment of 15 cubic centimeters of

urine. The following table shows at a glance the result of the various examinations:

Examinations	Albumin	Pus Corpuscles	Casts.
I	Trace.	Abundant.	Hyaline and yellow granular.
II	Trace.	Moderately plenty.	None.
III	Eight per cent. bulk.	Abundant.	One Hyaline cast.
IV	Trace.	Moderately Abundant.	None.
V	Trace.	Abundant.	Six hyaline, three granular.
VI	One per cent. bulk.	Not Abundant.	One hyaline cast.

In spite of this condition of the urine he has recently been accepted as a risk by a life insurance company.

The question may naturally be asked: How is it that a man, from whose urine albumin is never absent, can be accepted as a risk by a reputable life insurance company? The answer to this question is that in all probability he was examined for insurance by an examiner who used the cold nitric acid (Heller's) test, and found no albumin.

After an experience of nearly twenty-five years in urine testing, the writer has come to regard the cold nitric acid test with disfavor. Used for life insurance purposes it rejects an otherwise healthy young man with post-gonorrhœal inflammation of the neck of the bladder (in which disease, as Ultzmann long since showed, the amount of albumin is out of all proportion to the amount of pus, corresponding to the severity of the tenesmus), while on the other hand it may allow a man over forty, with chronic albuminuria, to take out a policy, provided he be examined at a time when the albumin is diminished to traces, as is often the case in the urine of contracting kidney.

"But," says the defender of Heller's test, "on what other test can we rely?"

The writer admits that the question is a difficult one to answer. The following article is the result of nearly three months' labor in an effort to discover a method superior in delicacy to the cold nitric acid test, while at the same time not liable to cause the errors to which the more delicate tests may lead.

In the first place, the writer examined a number of the tests described in the books, both as regards delicacy and reliability. The results were as follows:

COLD NITRIC ACID TEST.

Granting that this test is of value in showing the presence in urine of various substances which are not albumin, and that there is comparatively little danger in mistaking albumin for anything else when the test is properly applied, nevertheless it is decidedly inferior in delicacy to certain other tests, in fact to nearly all others with which the writer is familiar.

The writer having diluted albuminous urine with normal urine, giving no ring with any test, found that after various dilutions the limit of the cold nitric acid test was reached long before half a dozen others failed. Moreover, when the ring is very small by the contact method, if the urine is high-colored the omnipresent color zone may obscure the ring of albumin altogether. Lastly, when the urine is hazy, even after several filtrations, a delicate ring may escape detection on account of the general supernatant haziness.

Clinically the cold nitric acid test failed to show albumin in one of the writer's cases which was convalescing from acute nephritis, in whose urine tube-casts could easily be found, and in which no other test tried failed to give abundant evidence of the presence of albumin.

Yet unless it can be demonstrated that a more certain as well as more delicate test is within our reach, the cold nitric acid test by contact certainly has its advantages from a life insurance standpoint. If, on the other hand, a test more delicate and just as certain, to distinguish albumin from other substances can be found, the cold nitric acid should be discarded by examiners in order to exclude certain dangerous cases of contracting kidney prior to the establishment of cardiac changes sufficient to reject the applicant in whose urine albumin can, in the writer's experience, always be found and distinguished from other substances.

The cold nitric acid test in the writer's hands fails to give a ring with albuminous urine diluted with normal urine, until by Purdy's tables it contains one part albumin by weight in 15,000 or more of urine, even after standing half an hour. Millard says this test detects 1 part of albumin in 100,000, when solutions of Merck's albumin in distilled water are used. He is either (1) mistaken or else (2) urine-albumin in urine is more difficult to detect than Merck's dried albumin in water, or else (3) Purdy's tables of the relation of bulk to weight are erroneous, which is most unlikely.

Whichever of these things is true, the fact remains that the cold nitric acid test is a comparatively crude test, which may fail to show small quantities of albumin in urine which is never entirely free from albumin.

NITRO-MAGNESIAN TEST.

This test is more delicate than the cold nitric acid test, and the uncertainty from presence of color zone is less great; but the test is nevertheless not the most delicate, and fails to detect urine-albumin in dilutions with normal urine, when it is easily found by certain other tests, which gave no immediate reaction with the normal urine used for dilution. It will easily detect 1 part of albumin in 15,000 of urine, thus surpassing the cold nitric acid, but fails to show 1 part in 100,000. The solution used by the writer consists of equal parts of nitric acid and saturated solution of magnesium sulphate.

HEAT AND NITRIC ACID TEST.

Objectionable on account of the darkening of the urine caused by addition of the acid. A small quantity of albumin may thus escape detection. In neutral and alkaline urines effervescence makes the test valueless for deciding with accuracy whether or not a trace of albumin is present.

HEAT AND ACETIC ACID.

According as the acetic acid is added before or after boiling the urine, the following objections arise:

1. If the acetic acid is added before the urine be boiled, aceto-soluble albumin may escape notice, or nucleo-albumin mislead.

2. If the acetic acid be added after the urine is boiled, nucleo-albumin may be precipitated in acid urine, or phosphates, which have appeared in alkaline urine on boiling, are not always entirely dissolved, leaving a faint haze which may be mistaken for a trace of albumin. It is possible that by three or four successive filtrations prior to testing, the error due to nucleo-albumin can be removed. The test is very delicate. When performed properly, *i. e.*, by boiling the upper third of the clear urine after thorough filtration and subsequent addition of a few drops of 20 per cent. acetic acid, 1 part of urine-albumin in 100,000 parts of non-albuminous urine is plainly visible.

The writer seems to have proved that the faint haze which may remain after acetic acid has been added to phosphates precipitated by boiling the urine, is not due to presence of a trace of albumin. The writer also seems to have proved that the haze which sometimes appears when acetic acid is added to boiling urine, clear before addition of acetic acid, is not due to a trace of albumin. For particulars see technique of method described below.

FERROCYANIC TEST.

Has some of the disadvantages attendant upon the use of acetic acid, and is, moreover, not a delicate test. In the writer's hands it failed by the contact method to detect 1 part urine-albumin in 100,000 normal non-albuminous urine. Once in the writer's experience it gave a copious blue precipitate, occurring in a few minutes, and suggesting presence of iron in some form in the urine. The writer is satisfied that this test precipitates nucleo-albumin when present, by virtue of the acetic acid it contains. Repeated filtrations may do away with this source of error, but the lack of delicacy still remains as an objection to its use in some few cases.

ESBACH'S REAGENT.

This test is certainly as delicate as any—or at least it holds out with the various dilutions; but it is a most uncertain test in the sense that by the contact method it gives a ring with alkaline carbonates, found in neutral and alkaline urines containing no albumin, to say nothing of the precipitation of other substances, for account of which see text books on urine analysis.

ACID BRINE TEST.

In the writer's hands this test failed to show 1 part urine-albumin in 100,000 parts normal urine used for dilution, due allowance being made for the well-known slowness of the reaction.

TRICHLORACETIC ACID TEST.

Is sufficiently delicate, but, despite all assertions to the contrary, is uncertain, in the sense that it gives a ring with alkaline carbonates, as can be proved by floating a solution of ¼ of 1 per cent. ammonium carbonate on a saturated solution of trichloracetic acid. With neutral urines the ring due to presence of carbonates is small, with haze above it, but in alkaline urines the ring is distinct, though albumin be entirely absent. Trichloracetic acid gives a ring with acid urine of high specific gravity containing no albumin, and which has remained unclouded after application of heat and acetic acid.

TANRET'S TEST.

Resembles trichloracetic acid in giving a ring due to carbonates with neutral and alkaline urine. In the writer's hands it failed to give a ring with urine containing 1 part urine-albumin in 100,000 parts normal acid urine, showing only a faint haze. Tanret's solution gives a ring with acid urines of high specific gravity containing no albumin, as in the case of trichloracetic acid.

MILLARD'S TEST.

Millard's test gives a plainly visible ring with some normal acid urines. This ring does not appear or at least is exceedingly faint, after the same urine has been filtered three or four times successively through three thicknesses of filter paper each time. It is doubtful whether this ring is due to carbonate, as Millard's test gives no ring with a ¼ of 1 per cent. solution of ammonium carbonate. The test solution turns reddish and becomes more or less opaque with age. In the writer's hands the test served to detect 1 part of urine-albumin in 100,000 normal urine used for dilution, but the ring obtained was not as clear-cut as that given by some of the other tests and there was haziness above it. In strongly acid urines of high specific gravity containing no albumin Millard's test may give a ring even after three filtrations through three thicknesses of paper each time.

JOLLES' AND SPIEGLER'S TESTS.

Both these test solutions contain mercuric chloride. They are exceedingly delicate reagents for albumin, but also for alkaline carbonates. Spiegler's test gives a ring with nearly every sample of urine tested, even with some acid urines depositing uric acid crystals and containing no albumin.

The writer having with some difficulty obtained a sample of urine which after repeated filtrations finally gave no ring with Spiegler's reagent on standing five minutes, used this filtered urine for dilution of albuminous urine until the mixture contained only 1 part of albumin in 100,000, Purdy's tables being taken as a basis for calculation. With such urine Spiegler's test gave a well-defined ring visible after three minutes.

THE CHROMIC ACID TEST.

Used in 5 per cent. solution, as recommended in the books, mixed with the urine and heated, this test, owing to depth of color and peculiar action with light, fails to show traces of albumin. But in dilutions of 1 per cent. or less and used by the contact method, care being observed in the use of a dark background tilted at the proper angle, small quantities of albumin can be detected.

Unfortunately, however, with use of the background as described, plainly visible though very delicate rings are obtained in the case of normal urine free from albumin.

The conclusions drawn from study of the different tests are as follows:

1. Heller's test (cold nitric acid contact) fails to

detect 1 part of urine-albumin in 15,000 parts of urine, *i. e.*, fails to give any ring.

2. One part of urine-albumin in 100,000 of urine is easily detected by Spiegler's test and by Millard's test, the contact method being used; Esbach's reagent also gives a ring; boiling heat followed by acetic acid gives a haze, seen after heating, and plainly seen after addition of 20 per cent. acetic acid.

3. Tanret's test, the nitro-magnesian test, and the acidulated brine test failed in the writer's hands to give a ring with urine containing 1 part of urine-albumin in 100,000 of urine. The nitro-magnesian test is more delicate than the nitric acid test, and will show very plainly 1 part of urine-albumin in 15,000 of urine by presence of a ring.

On the other hand, all the so-called delicate tests for albumin which the writer has tried are, without exception, untrustworthy, since they give rings as follows:

(*a.*) With all neutral or alkaline urines, due to presence of alkaline carbonates; (*b*) with concentrated acid urines which remain unclouded when heated, even after addition of acetic acid in any strength (50 per cent. or below); (*c*) with some urines of normal color and reaction, which yield no precipitate with calcium chloride, and which are apparently normal in all respects. That the ring found by testing neutral or alkaline urine is due to presence of alkaline carbonates is easily proved. To such urines add 10 per cent. their volume of strong calcium chloride solution, stir with a glass rod and filter. Now test the filtered urine as before by contact and the ring is either absent or much diminished in size. To what the rings are due ,which form with urines described under *b* and *c* the writer is unaware. Heat tests for urates and albumoses in case of urine as in *b* have been unsuccessful, nor has the ordinary test for nucleo-albumin with acetic acid always been successful in the case of urines, as in *c*. Even chromic acid solution, as dilute as 5/8 of 1 per cent., gives a plainly perceptible ring with aparently normal urines.

N. B. It is understood that in all cases where a ring is specified as found, that it was seen at the juncture of the two liquids, and that it was seen by holding the tube, if necessary, against a dark background. In the case of dilute solutions of chromic acid the ring with normal urine cannot easily be seen except against a dark background.

By urine containing no albumin is meant that which remains entirely clear after boiling and also after addition of dilute acetic acid; or which gives no ring in several minutes with Spiegler's test, after carbonates have been removed.

Having examined the various tests for albumin, the writer next sought for a simple method which by preliminary treatment of the urine should remove substances which interfere with the certain detection of small quantities of albumin. In this only partial success has been attained. If a sample of urine giving a ring with Spiegler's test, for example, also gives a precipitate with strong solution of calcium chloride, absence of 1 part albumin in 100,000 of urine can often be shown as follows:

1. Filter the urine once or twice through three thicknesses of filter paper.

2. Add to the filtered urine 10 per cent. its volume of an 80 per cent. solution of calcium chloride crystals.

3. Filter again through three thicknesses of paper, ceasing to filter before the fibrate becomes in the least degree cloudy.

4. Float the last filtrate in equal parts on an inch of Spiegler's solution.

If no ring appears in less than five minutes, albumin in quantity 1 part in 100,000 is absent. If albumin in this quantity or more is present a ring will appear in less than five minutes.

Great care must be used in floating the filtered urine on the test solution, or the two will mix in such a way that no ring at all will be seen. The writer has noticed that a ring generally appears when albumin is absent, after ten minutes or more, but when albumin 1 part in 100,000 is present the ring appears promptly; that is, in less than five minutes. Urines which give slight rings with the delicate tests, and which do not yield a precipitate with calcium chloride must be referred to the heat test. If heating the upper part of the column of such urine, after repeated filtrations, causes no turbidity, albumin may be assumed to be absent, because absence of a precipitate with calcium chloride permits us to infer that the reaction of the urine is sufficiently acid to cause coagulation of albumin by heat, if albumin is present. There may in rare cases be opportunity for error, through hyper-acidity of the urine. The patient should, if this be suspected, be caused to use diluents. If urines which yield no precipitate with calcium chloride and give slight rings with the delicate tests become faintly cloudy, when heated, albumin in small quantity is probably present; but if the cloudiness only appears after addition of acetic acid subsequent to boiling it is probably due to presence of nucleo-albumin. Addition of acetic acid to the cold urine, followed by thorough filtration and heat, will remove error from nucleo-albumin, but may prevent precipitation of small quantities of albumin in certain cases.

The writer is therefore unable to suggest any simple method for the detection of very small quantities of albumin which can be relied on in all cases, but thinks that when cold nitric acid fails to give a ring the urine should be tested as follows:

(1) by the method described above, *i. e.*, filtration, addition of calcium chloride solution, filtration and use of Spiegler's test-liquid, or (2), when no precipitate occurs on addition of calcium chloride, by the heat test alone, or (3) when no precipitate occurs on addition of calcium chloride, but heat alone causes turbidity, by use of the microscope, which is, in such a case, a necessity.

Formerly, lack of time prevented microscopic examination by insurance examiners; but nowadays use of the centrifugal machine renders it possible to find tube-casts with the microscope in less than ten minutes. The writer once timed the operation and found eight minutes sufficient from the time the urine was voided until a report was written out. Tube-casts are found in urine which, at the time, may give no ring with the cold nitric acid test; but urine which from time to time contains casts, in quantity six or more per 15 c. c. will, if frequently tested, be found to contain albumin even by cold nitric acid.

The writer would not accept as a risk a patient in whose urine tube-casts were readily found, even if the cold nitric acid test were negative and especially if (1) either the Spiegler test, preceded by filtration, addition of calcium chloride, and filtration gave a ring appearing in less than five minutes; or (2) in the absence of a precipitate with calcium chloride heat alone caused a turbidity.

Finally, life insurance examiners should use the centrifuge and microscope in the case of every applicant over forty years of age.

A summary of the conclusions which the writer arrives at is as follows:

1. Patients with chronic albuminuria and cylindruria are accepted as risks by life insurance examiners; probably because of lack of delicacy of the cold nitric acid test.

2. The cold nitric acid test fails to detect 1 part of urine-albumin in 15,000 parts urine, Purdy's tables being taken as a basis for calculation.

3. Jolles', Spiegler's, Esbach's, and Tanret's tests, together with trichloracetic acid, give rings with urine containing alkaline carbonates, when albumin is absent.

4. The absence of albumin from such urine containing alkaline carbonates can be demonstrated by filtration, precipitation with 10 per cent. of an 80 per cent. soluton of calcium chloride, filtration, and flotation upon Spiegler's test.

5. The tests mentioned in 3, together with Millard's test, and dilute chromic acid solution, give rings with urines not containing carbonates and which remain unclouded when heated. The size and plainness of the ring increases with the specific gravity of the urine.

6. Absence of albumin from urines, as in 5, must be proved by the heat test alone.

7. Urines which give no precipitate with calcium chloride, but which cloud slightly when heated, the precipitate being insoluble in acetic acid, doubtless contain a trace of albumin. Inasmuch as the statement has been made that nucleo-albumin is coagulated by heat in acid urine the microscope should invariably be used in such cases. The same is true in the case of urines remaining clear when heated, but which cloud slightly on addition of dilute acetic acid.

PLEURAL EFFUSIONS AND THEIR MANAGEMENT.

By M. E. Fitch, M. D., Philadelphia, Pa.

THE cause of primary pleurisy is a much-discussed and, as yet, unsettled question. The idea that cold had much to do with the causation has been handed down from the older generations of practitioners, and many of the profession at present entertain this view. But since bacteriology has attained its notable position in medicine mere cold is not given the same importance as it formerly was. It is admitted to be a predisposing cause only in many instances and diseases where once it was considered the exciting agent.

This is true in pleurisy to a great degree. Three well-defined classes of cases of microbic origin are those due to the pneumococcus, the streptococcus, and the tubercle bacillus. Osler gives a summary of the etiology which we think well represents the most modern conclusions of the profession. "We have not yet brought all the acute pleurisies into the category of microbic affections, and the fact remains that pleurisy does follow with great rapidity a sudden wetting or a chill. Of late years an attempt has been made, especially by French writers, to show that the majority of acute pleurisies are tuberculous. In this connection the following facts may be admitted: (1) In a large number of cases of pleurisy coming on abruptly in healthy persons the disease has been shown—*(a)* by post-mortem, in cases of accidental or sudden death, *(b)* by the subsequent history—to be tuberculous; (2) in a larger proportion of those cases which come on insidiously in persons who have been in failing health, or who are delicate, the disease is tuberculous from the outset; (3) the acute pleurisy, which occurs as a secondary, often a terminal, event in chronic affections, such as cirrhosis of the liver, Bright's disease, and cancer, is very frequently tuberculous. I confess that the more carefully I have studied the question the larger does the proportion appear to be of primary pleurisies of tuberculous origin. The subsequent history of cases of acute pleurisy forces us to conclude that in at least two-thirds of the cases it is a curable affection. This may well be so, according to our present ideas of local tuberculous disease. It has been demonstrated clearly that a large amount of the exudate must be taken to make the test complete, either in cultures or in the inoculation of animals. Echhorst found more than 62 per cent. were demonstrated as tuberculous when as much as 15 c.c. of the exudate was inoculated into test animals, while less than 10 per cent. of the cases showed tuberculosis when only 1 c.c. of the exudate was used. This is a point to which observers should pay very special attention."

Lop and Monteux describe the pleurisy due to staphylococcus infection as of slow development and long-continued course. The fluid formed is at first serous, afterward becoming purulent, and does not contain flakes of fibrin. This form of pleurisy usually occurs in people of poor health, and frequently resembles tuberculous pleurisy. The diagnosis is often difficult. Of interest in this connection is the fact that observers with the fluoroscope have found that purulent effusions are less opaque than serous. Displacements of the fluid by changes of posture and also by movements of the diaphragm were noted. A case of pneumothorax with effusion has also been studied with the fluoroscope, which showed vertical movement of the upper surface of the fluid during respiration. Pulsation of the pneumothorax was observed to be due to direct transmission of the cardiac impulse, and not from an impulse communicated from the air to the fluid. This was proved by the fact that the pulsation ceased when the patient lay on his left side, the side of the effusion, and thus left the heart surrounded by air. This is considered strong proof of Traube's theory that pulsating empyema is a direct transmission of the impulse of the heart.

Glaser (*Therap. Monatsh.*) gives the results of the study of the urine in a series of over 200 cases. In many of the cases the amount of the urine was

increased with the effusion, while in others large quantities of the fluid were absorbed without any increase in diuresis. In still other cases there was marked diuresis without any absorption of fluid. The latter cases are probably connected with such an overfilling of the vascular system that only a considerable period of diuresis could relieve the pleural effusion.

J. C. Wilson, in his clinic of November 21, 1898, showed a case of large left-sided pleural effusion which showed distinct fluctuation. The patient was emaciated and had weak muscles, and relaxed belly-walls and diaphragm. This helped account for the fluctuation, which was the first time he had found the symptom in a purely serous effusion. Aspiration had been done in the eighth space in the posterior axillary line and no fluid was obtained. The seventh space was then tried and five pints withdrawn. Aspiration was then stopped because of cough. This had been done the day before, instead of waiting for the clinic, because there was danger of sudden death in such cases. One case of this kind was cited, where in consultation they had decided to tap the patient on the following morning, but sudden death occurred during the night. This emphasized the need of immediate interference in very large effusions. He has not had recourse to the so-called dry treatment for several years, because it is a hardship to the patient and is unnecessary. Purges, diaphoretics and diuretics, the salicylates, etc., occasionally do good, but the latter especially are unreliable. If the effusion persists, aspirate. He insists that it is bad practice to rely exclusively on drugs if the effusion fails to yield in a week or ten days. Make the exploration with an aspirating needle instead of a hypodermic. It gives but little more pain, and if fluid is found it can be evacuated at once without introducing a second needle, as is necessary if the exploration is made with a hypodermic. Do not use ice or freezing mixture, as the pain is not very severe. Tell the patient that there will be some pain for a moment. The puncture should be in the seventh interspace, at about the posterior axillary fold. The patient should be in the sitting posture, as the danger signal will be obtained earlier by this position.

Arthur V. Meigs contends that the opening, both when aspirating for serous effusion and making drainage in empyema, should be high up and anteriorly. He prefers the fifth interspace in the anterior axillary line, or even the fourth in some cases. His experience has convinced him that this gives much better results than when the opening is made posteriorly and lower down. The fluid collects in the triangular cavity between the diaphragm and the chest wall. If this is evacuated the surfaces are apt to adhere and leave only a small space below the adhesions, while the main cavity is above and shut off from the opening. A case was cited where a resident physician wanted an opening made lower down than had been done, though the first opening was lower than he advocates at present. The second opening was accordingly made and the patient died after but little pus had been drained. A post-mortem showed that the second opening should have been made higher than the first, instead of lower, as there was a large quantity of pus present. The pus is drained from the high opening by turning the patient on his side at intervals. Two quarts of pus were evacuated from the patient exhibited, at the time the incision was made in the fourth interspace. The patient's condition was improving steadily.

H. A. Hare thinks purging, diuresis, etc., futile, and of no value, and advises to let the effusion alone or tap. It is impossible for much absorption to occur through the pleura, greatly thickened by the lymph poured out, this sometimes reaching the thickness of one-fourth or even one-half inch. Hence profuse sweating or purging or diuresis only weakens the patient, without greatly increasing the absorption of the effusion. When the pleural effusion follows pneumonia he would not tap sooner than four or six weeks, unless it produced dyspnœa, when the tapping should be done at once. Tapping should be done at the posterior axillary line and in the sixth interspace on the right side, and the seventh on the left. A hypodermic of cocaine by Schleich's infiltration method is used to lessen the pain. In the case of an empyema a large trocar and canula is used and a rubber tube inserted through the canula, which is then withdrawn and the tube is left in for drainage and covered by a large bandage. Washing out by antiseptic fluids is considered a dangerous proceeding.

Teman (*Med. News and Pediatrics*), uses a new method of irrigation in empyema. Cases of empyema with fistula are irrigated by placing the patient in a warm bath. If the fistulous opening is on a lower level than the fluid of the bath and the patient respires freely while in the bath, a current of air will enter and flow out of the cavity. This current is stronger than that attained by ordinary irrigation, and will bring away masses of fibrin and clotted blood. The bath should be of boiled water which has been cooled to the temperature of the body, and should last ten or fifteen minutes.

Pichler has reported a number of cases treated by permanent drainage. He incises the skin and inserts a trocar having a diameter of about six mm. Pus is apt to pass between the tube and the edges of the wound, but this can be remedied in some cases by inserting a larger tube. The appearance of fetid pus calls for irrigation of the pleural cavity, or, perhaps better, immediate thoracotomy. This method of drainage is most useful in recent cases, though it is justifiable to try it in old ones. It should only be employed when the patient is under immediate control of a surgeon and thus can be carefully watched.

B. F. Curtis (*Med. Rec.*, March 19, 1898), writing upon the treatment of chronic empyema, says that a few cases are chronic from the start, but most of them begin as an acute inflammation. Every acute empyema should be drained early to prevent adhesions of the compressed lung, thus preventing expansion when simple drainage is applied. The opening should be made low down and far back, and a portion of a rib resected. The drainage tube should be about one-half inch shorter than the sinus, so that it does not make pressure on the bottom of the cavity. A common cause of empyema is slipping of the drainage tube into the chest. Tubes should be of fresh rubber and changed whenever they are found to be getting brittle. Drainage by incision is usually the only method of treatment

feasible when a closed empyema does not communicate with a bronchus, as, owing to the air in the chest, aspiration will not drain thoroughly. An opening should be made, a portion of rib resected, and further operation delayed until the patient recuperates, radical operation being done when there is evidence that the cavity will not be closed. This can be determined by repeatedly probing or using a measured quantity of fluid. From four to six weeks is considered a proper time to wait in these cases.

A STUDY OF THE ETIOLOGY AND TREATMENT OF CHOREA.

By L. J. Smith, M. D., Philadelphia, Pa.

CHOREA is a disease that is perhaps more interesting from the etiological standpoint than from any other. There is a well-defined method of treatment which is adopted, except in minor details, by the great majority of practitioners, and this is generally successful, recovery being the rule. As to the cause of the disease, however, and its relation to other acute diseases which affect children particularly, there is no such unanimity of opinion. What part rheumatism has in the causal rôle, the position of endocarditis in the sequence of events, the infectious nature of the disease—all of these are points of discussion and each finds advocates for and against. As might be expected, the advocates in that line have brought the theory of the infectious origin of the disease into prominence of late. One thing unexplained by that theory, however, is the fact that fright, apparently, is the only cause of some cases of the disease. This is a point in favor of the neurotic nature of the affection which has not been successfully explained in any other way.

There is a tendency to the disease in some families, and Lannois and Paviot (*Arch. de Neurol.*) have given the results of autopsies upon two cases of hereditary chorea. In addition to the meningeal thickening and recent hematomata found, cerebral atrophy was so marked as to attract particular attention. The entire brain weighed 950 g. in one case and 980 g. in the other. Microscopically the principal change noticed was the infiltration of small round cells in the cortical layers and white substance subjacent, the invasion of the lymphatic sheath enveloping the pyramidal cells. The cord was also slightly affected in the descending columns, the direct cerebellar tracts, and in the anterolateral regions. Of interest in this connection, regarding the pyramidal cells, although not exactly analogous, is the result of an autopsy reported by F. X. Dercum at one of his clinics. The case mentioned was that of a child of six years of age, in whom death resulted from extreme fright caused by a railroad train. Continuous movements and screaming were kept up until after some hours speech was lost, and finally death ensued. Autopsy showed that in the second left frontal convolution the number of large pyramidal cells was greatly reduced. The case in the clinic at the time was a child who had a certain degree of stammering, and in whose history there was the occurrence of a severe fright. Stammering was mentioned as being closely related to chorea, it being practically choreiform and ataxic movements of the lips, tongue and larynx. Chorea was stated to be most frequent during periods of six or eight weeks each in the fall and spring, and seemed not infrequently to result from fright, although the infectious nature of the disease was believed to be established.

Legay concludes from a study of statistics, that chorea is found in those persons who have a neurotic heredity. This is in accord with nearly all investigators of the subject, but he adds further that there is almost always a recent infection preceding the disease. This in the majority of cases is rheumatism, but in some instances it arises from measles, pneumonia, scarlet fever, and other allied acute infections. M. Marfau also concludes that chorea is preceded by acute rheumatism, or by an infectious disease. He is distinctly in favor of the infection theory of chorea, and believes it is a neurosis provoked by a non-specific infection which is developed in predisposed soil. Theories which regard it as a specific infectious disease, or a neurosis of cerebrospinal origin, are rejected by him. He concludes that chorea and endocarditis arise from the same cause and that this explains their coincidence.

Osler, in the latest edition of his "Practice," gives the following views in regard to the causes of chorea which have been mentioned: A causal relationship between rheumatism and chorea is claimed by many English and French writers, while German authors do not, as a rule, regard the connection between the two as a close one. In 554 cases he has analyzed there was a history of rheumatism in the family of the patient in 15.5 per cent. In 15.8 per cent. there was a history of articular swelling, acute or sub-acute. In thirty-three cases there were pains, sometimes described as rheumatic, in various parts, but not associated with joint trouble. If all such cases are regarded as rheumatic, and all those with manifest articular trouble are added, the percentage is brought up to about 21. Two groups of cases in which arthritis is found are present in chorea. In one, the arthritis antedates by some months or years the onset of the chorea, and does not recur before or during the attack. In the other group the chorea sets in with or follows immediately upon the acute arthritis. In some instances it is impossible to decide whether the joint symptoms or the movements have appeared first. It is difficult to differentiate the cases of irregular pains without definite joint affection. It is probable that many of them are rheumatic, yet it would be a mistake to regard as such all cases in children in which there are complaints of vague pains in the bones or muscles. It should never be forgotten, however, that a slight articular swelling may be the sole manifestation of rheumatism in a child, so slight, indeed, that the disease may be entirely overlooked. Scarlet fever with arthritic manifestations may be a direct antecedent of chorea. With the exception of rheumatic fever there is no intimate relationship between chorea and the acute diseases incident to childhood. He considers that the so-called cases caused by fright in the majority of instances have no close connection between the fright and the onset of the disease.

This writer belileves that the strain of education

particularly in girls during the third hemidecade, is a most important factor in the causation of chorea. Bright, intelligent girls from ten to fourteen years of age, ambitious and often stimulated to great efforts by teachers and parents, form a large percentage of the cases presented for treatment. *School-made* chorea has been mentioned as a serious evil in our modern method of forced education. Lastly, he considers the infectious theory of the disease, and concludes that nothing that can be considered as definite has been determined. In favor of this view has been urged, as it is impossible to refer the chorea to endocarditis, or the endocarditis to rheumatism in all cases, that both are due to a common cause, some infectious agent, which is also capable, in some persons, of exciting articular disease. Cases have been reported in scarlet fever with arthritic manifestations, in puerperal fever, after gonorrhœa, etc., and such facts are suggestive of the association of the disease with infective processes. Possibly the paralytic conditions associated with chorea may be analogous to those which occur in typhoid and certain of the infectious diseases. On the other hand, there are conditions extremely difficult to harmonize with this view. The prominent psychical element is certainly one of the most serious objections, since there can be no doubt that ordinary chorea may rapidly follow a fright or a sudden emotion.

From this review of the opinions of competent observers it would seem that the infectious theory is strongly pointed to in many of the cases. In the cases resulting from overstudy this condition might be explained by the fact that forced mental application, accompanied, as it almost invariably is, by deficient physical exercise and development, causes a lowering of the resistive powers of the individual which admits of infection. But where does the infection come from, if no other disease accompanies the choreic manifestation? This would naturally presuppose the existence of a specific organism for chorea, which is against the consensus of opinion. We must conclude that the advocates of the infectious theory, though having much in their favor, have still some important facts to explain. Bacteriology is in its infancy as yet, however, and additional proof may be forthcoming.

Osler's statements regarding heart symptoms in chorea are well worth careful examination:

(1) In thin, nervous children a systolic murmur of soft quality is extremely common at the base, particularly at the second left costal cartilage, and is probably of no moment.

(2) A systolic murmur of maximum intensity at the apex, and heard also along the left sternal margin, is not uncommon in anæmic, enfeebled states, and does not necessarily indicate either endocarditis or insufficiency.

(3) A murmur of maximum intensity at the apex, with rough quality, and transmitted to axilla or angle of scapula, indicates an organic lesion of the mitral valve, and is usually associated with signs of enlargement of the heart.

(4) When in doubt, it is much safer to trust to the evidence of eye and hand than to that of the ear. If the apex beat is in the normal position, and the area of dullness not increased vertically, or to the right of the sternum, there is probably no serious valvular disease.

(5) The endocarditis of chorea is almost invariably of the simple or warty form, and in itself is not dangerous; but it is apt to lead to those schlerotic changes in the valve which produce incompetency.

(6) Pericarditis is an occasional complication of chorea, usually in cases with well-marked rheumatism.

Regarding the treament of chorea, two things are regarded by the great majority of practitioners as being indicated—rest and Fowler's solution. Other drugs are used in case this one fails in any case, but it is the one that gives the most satisfaction as a routine treatment. Guthrie makes two groups of cases, based on Mitchell's classification of motor symptoms. These groups indicate the method of treatment and are: 1. Sthenic, or explosive. 2. Asthenic, or pseudo-paralytic. For both groups rest in bed is essential at the start. The first group calls for sedatives, such as chloral, the bromides, antipyin, etc.; the second needs tonics like quinine, arsenic, and strychnine.

H. A. Hare considers cimicifuga the next best remedy when arsenic fails, and gives it in the dose of 20 to 30 drops of the fluid extract to a child of ten years. Where the disease is associated with rheumatism, near or remote, the salicylates or iodides should be thoroughly tried. He finds that in cases where the muscular jerkings are so severe that sleep is impossible, a hot pack at bed-time will often give a quiet night. Care must be taken that a heat-stroke does not result, and if sweating does not come on and oppression ensues, the blanket must be removed. Before the patient is returned to bed the sheets should be ironed to make them warm and dry. Blankets are often better for the child to sleep between. The efficacy of this treatment is increased by the use of a dose of bromide of sodium or potassium and a little chloral. Tyson, in addition to Fowler's solution, gives one of the preparations of iron continuously in moderate doses.

Osler states that abnormally bright, active-minded children belonging to families with pronounced neurotic taint, should be carefully watched from the age of eight to fifteen, and not allowed to overtax their mental powers. So frequently does chorea in this class of children date from the worry and stress of examinations, that competition for prizes or places should be emphatically forbidden. The treatment of the attack consists largely in attention to hygienic measures. The medical treatment of the disease is unsatisfactory; with the exception of arsenic, no remedy seems to have any influence in controlling the progress of the affection. He has frequently given as much as 25 minims of Fowler's solution three times a day, and has never seen any ill effects from the large doses. For its tonic effect electricity is sometimes useful; but it is not necessary as a routine treatment. The question of gymnastics is an important one. Early in the disease, when the movements are active, they are not advisable; but during convalescence carefully graduated exercises are undoubtedly beneficial. It is not well, however, to send a choreic child to a school gymnasium, as the stimulus of the other children and the excitement of the romping, violent play is very prejudicial.

Cases are found now and then which drag on from month to month without getting either better or worse, and resisting all methods of treatment. Change of air and scene is sometimes followed by rapid improvement, and in these cases the treatment by rest and seclusion should always be given a full trial.

Tarnier and Dakin write upon chorea in pregnancy, the former considering it a much more serious complication than hysteria or epilepsy. Some of the patients die suddenly from asphyxiation, others become paralyzed, and still others maniacal. The latter condition results in exhaustion and greatly lessens the probability of recovery. The disease usually appears during the first six months of pregnancy, the worst cases occurring at the second, third and fifth months. After delivery hyoscin, used hypodermically, is more efficient than morphine. A history of rheumatism or chorea prior to pregnancy is to be noted in many of the cases. Arsenic, quinine and tonics constitute the treatment in the majority of cases.

E. P. Davis mentions a case in which choreic uterine contractions were distinctly observed. Pregnancy was uninterrupted, however, and went on to term and normal labor. The prognosis for the child depends upon the period of pregnancy at which chorea develops. The earlier in pregnancy the disease begins the graver the prognosis. He recommends arsenic, cimicifuga, and if rheumatism be present, the salicylates. If incessant movements threaten exhaustion the pack should be used at night to induce sleep. The water should be tepid or warm, and a half-ounce of whiskey with milk or egg should be taken at the time. Hypnotics and sedatives should be limited as much as possible. If it is necessary to perform any manipulations about the uterus in the choreic patient, it is often best to anæsthetize her with bromide of ethyl or chloroform, rather than increase her movements by the irritation of an examination or application. Labor is sometimes rapid or violent in these patients, because the choreic condition seems to exacerbate the muscular contractions of the uterus. Care must be taken to control the patient during labor, to avoid serious lacerations. It is the duty of the obstetrician to interrupt pregnancy when the complication is exhausting the patient through excessive muscular action and loss of sleep. If a grave physical condition, such as that of endocarditis, be present, or if mania has developed, the pregnancy should be terminated at once.

RECENT IDEAS REGARDING THE LOCAL TREATMENT, AND THE USE OF THE SALICYLATES IN RHEUMATIC FEVER.

By R. W. Wilson, M. D., Philadelphia, Pa.

PATIENTS suffering from the excruciating joint pains of rheumatic fever are apt to think that the physician is negligent in regard to their comfort if he does not apply something to relieve the condition. Many applications are in vogue, both by the laity and the profession. While some of these do actual good, perhaps the mental effect upon the patient plays a large part in the result obtained.

Dr. J. C. Wilson does not have much faith in the application of ichthyol, iodine, etc., to the inflamed joints of rheumatic fever, and says he has never been led to believe that these have any influence on the fever. Its fugitive nature easily misleads one as to the result of material used. One joint gets well, while others are implicated, and this may be attributed to the effect of the local application. He finds the best results in practice from enveloping the joints in material to lessen friction of surrounding objects and prevent the effect of changes of weather. For this purpose carded wool is the best, as it does not kink and does not become so foul from the sweating as does cotton. The limb should be lightly enveloped for some distance above and below the joint involved. The wool remains elastic and is easily removed for examination. He concludes that in local treatment rest and protection are the points to be observed, and that very little good is accomplished by unguents or even by oil of wintergreen or salicylic acid in the acute stages. They may be of use during slow resolution or convalescence.

On the other hand Dr. H. A. Hare states that ichthyol in his experience has proved most efficacious in the treatment of inflamed areas in acute articular rheumatism. He uses a 25 or 50 per cent. ointment with lanolin, which is smeared over the part affected and then spread on lint which is wrapped about the limb. "This usually relieves the pain and tenderness of the part to a great extent. The same application, accompanied by rubbing or applying massage to the joint, is of value for the pain and stiffness met with after the acute manifestation of the disease has passed by. In other cases the acute inflammation may be combatted with advantage, particularly where there is gastric disorder, by the local application of salicylic acid, made into an ointment with an animal fat."

Osler says: "The local treatment is of the greatest importance. It often suffices to wrap the affected joints in cotton. If the pain is severe, hot cloths may be applied, saturated with Fuller's lotion. Fixation of the joints is of great service in allaying the pain. I have seen, in a German hospital, the joints enclosed in plaster of Paris, apparently with great relief. Splints, padded and bandaged with moderate firmness, will often be found to relieve pain. Cold compresses are much used in Germany. The application of blisters above and below the joint often relieves the pain. This method is not to be compared with the light application of the Paquelin thermo-cautery.

Passing to the use of the salicylates in rheumatic fever, the author above quoted, after remarking that medicines have little or no control over the duration or course of the disease, continues: "Salicyl compounds, which were regarded so long as specific, are now known to act chiefly by relieving pain. R. P. Howard's elaborate analysis shows that they do not influence the duration of the disease. Nor do they prevent the occurrence of cardiac complications, while under their use relapses are considerably more frequent than in any other method of treatment. In acute cases, with severe pain the salicyl

compounds give prompt relief and rarely disappoint us in their action. Sodium salicylate in 15-grain doses for eight or ten doses, may be given. The bicarbonate of potassium, in 20-grain doses, may be used with it. Many prefer salicin (gr. 20) in wafers; others the salicylic acid (gr. 20) or salol. I have for the past five or six years used the oil of wintergreen, recommended by Kinnicutt, and have found it quite as efficacious. Twenty minims may be given every two hours in milk. The salicyl compounds are best given in full doses at the outset of the disease, to relieve the pain. Then the dose should be reduced in frequency, or, if the symptoms have abated, stopped altogether, as relapses are certainly more frequent under their use."

Tyson's conclusions are as follows: "Salicylic acid and salicylate of sodium are equally efficient, and whichever is used there is one condition of its efficiency, that is, its constitutional impression. The relief of the patient is seldom obtained, or if obtained, is of fleeting character, until the peculiar ringing in the ears is secured. To do this, in the adult from 1½ to 2 drachms of salicylic acid and from 2 to 3 drachms of the sodium salicylate in the first twenty-four hours are required. If the salicylic acid is given, it should be in capsules or compressed pills containing 7½ to 10 grains every two hours, followed by a little water or milk. The salicylate of sodium may be given in doses of from 10 to 15 grains in solution every two hours, or every hours if the pain is severe, until relief comes, after which it should be kept up until the toxic effect is produced, when the dose should be diminished, but the drug continued; or the interval may also be prolonged. Under this treatment the pain fades away, the swelling diminishes, and the anxious expression of the patient is changed to one of comfort in from twenty-four to forty-eight hours. Those who object to the salicylate treatment do so on the ground that the relief is not permanent, and it must be admitted that relapses do occur. I am confident, however, that this is often due to the fact that the remedy is too soon discontinued. As stated, the drug, while it should be cut down with the appearance of relief and toxic effect, must be continued for some time after relief is obtained. Sometimes the salicylates cannot be tolerated by the stomach, even in the smallest doses likely to be useful. They may then be given by injection as follows: The rectum is washed out with warm water, and after a short rest 20 to 40 grains or more of sodium salicylate in solution injected well up into the bowel. This may be done once in six hours with the happiest result, as I can attest from personal experience."

P. Collangettis (*Thèse de Paris*, 1897) has studied the indications for the administration of the salicylates when albuminuria is present with rheumatism. He has found that albuminuria is a very frequent condition in rheumatism, and is present in greater or less degree in 40 per cent. of the cases, but in most it is slight. In such cases there is no contra-indication to the use of the salicylates, but these help to cause the disappearance of the albumin. When there is evidence of actual nephritis, with a good deal of albumin and but a small quantity of urine, the salicylates are often extremely dangerous.

G. Lassere (*Nouveas Remèdes*, No. 22, 1897) has used methyl salicylate for rheumatism, administering it internally in a mixture of equal parts of sweet punch and water, to 200 parts of which he adds 1 part of the methyl salicylate, and orders 6 ounces of the mixture to be taken during the twenty-four hours. In forty cases of rheumatism this has been effective in relieving the pain.

G. Linossier and M. Lannois (*Bull. de l'Acad. de Mèd.*, March 22, 1898) again recommend the use of methyl salicylate by local application. They quote the reports of a number of authors to prove that the effects are good. In acute articular rheumatism the influence of methyl salicylate is the same as that of sodium salicylate, since the former becomes the latter as soon as it enters the circulation, but the methyl salt has the advantage that it does not irritate the stomach. In sub-acute and chronic cases they state that the methyl salicylate has marked superiority to the sodium salt, since it has both a general and a local action. It has some valuable effects in gouty cases as well, and even upon infectious rheumatic joint-inflammations. After experimenting upon certain individuals whose absorption was, as far as possible, identical, they came to the conclusion that absorption is far better and more rapid in case the drug is applied in ointment and then well covered with a bandage, than when the bandage is left off, so that they feel obliged to recommend the constant use of a dressing over the ointment.

Siredey (*Jour. de Méd.*, August 25, 1897) states that methyl salicylate is distinctly different from the essence of wintergreen, and the latter should not be used in its stead. He applies the methyl salicylate to the skin over the affected joints after the latter have been washed. It is put on drop by drop, and the joint then enveloped in gutta-percha tissue and a flannel bandage applied to it. This may be renewed twice in twenty-four hours, if the pains are very troublesome. The quantity used may be as large as 120 drops. This is a difficult and almost impossible treatment in acute rheumatism, and the drug is then best administrated internally; but in sub-acute or chronic cases it is a valuable treatment. Heart complications do not contra-indicate it. Linossier and Lannois have found that much less salicylic acid is found in the urine when methyl salicylate is applied in vaselin or lanolin ointment than when it is directly applied to a part and subsequently bandaged, so that in its local use they recommend that it be covered, as nearly as possible, hermetically.

S. Sterling (*Münch. Med. Woch.*, March 8, 1898) particularly recommends the external use of salicylic acid in those patients with acute rheumatism whose stomachs will not allow of the internal administration of the drug. He says, however, that he has seen severe gastric irritation from even this method of administration, as the salicylic acid is excreted by the stomach. The administration is effected by rubbing an ointment into the skin. Haslet (*La Nord Méd.*, May 15, 1898), has been able to treat acute articular affections by the rectal administration of sodium salicylate, and by means of this and local applications of the drugs he claims that the pain is usually relieved within three days.

Arthur V. Meigs stated in his clinic at the Pennsylvania Hospital, March 8, 1899, that salicylic acid should be given for a few days at the onset of the disease and then discontinued in order to avoid its possible untoward effects. Also that if it did not do good in this way its continued use would not have any effect upon the symptoms. He gives two 5-grain pills of salicylic acid, with 2 ounces of milk, every hour for six doses. This makes 1 drachm in twenty-four hours. This he continues for three days and then stops the drug. In the case before the clinic the progress under this treatment had been good but slow. After stopping the salicylic acid the patient had been getting 15 grains of the acetate of potassium and 20 grains of the bicarbonate of potassium every four hours. He concludes that salicylic acid relieves the pain, but has not much effect in shortening the course of the disease.

J. C. Wilson, in his didactic lectures at the Jefferson Medical College, says that like in syphilis and malaria, we now have a specific for rheumatic fever in salicylic acid and the salicylates. This is speaking from a clinical standpoint, as there is not in all cases definite results or cures, as are obtained from quinine and mercury and the iodides in the other diseases mentioned, but decided effects usually follow. Some say this treatment fails, but this throws some doubt upon the correctness of the diagnosis, as the drug has little or no effect on mono-articular lesions from other causes or on rheumatoid arthritis. He advises that the treatment be kept up for at least ten days after modification of the symptoms occurs. Other remedies given for analgesic effect undoubtedly give relief, but none reduce the length of the attack as do the salicylates. He is not in a position to say that the mixed treatment of the salicylates and alkalies is less liable to cause cardiac involvement, as some assert.

Hare states that it is useless to give salicylates in 5 or 10-grain doses three times a day, but they should be given in 20-grain doses morning, noon, and night, or oftener, or not at all. If the sweats are too severe or the stomach rebels they may be stopped, but not decreased in amount unless for good reason. It is to be remembered, however, that in many cases the salicylates are of no value whatever, merely producing sweats and headaches, and it is worthy of note that nothing else does these cases much good, as they seem bound to run a given course before the patient recovers. If a cure does take place, relapses are very common indeed, and the drug should always be continued for several days after all the symptoms cease.

Diagnosis of Intestinal Worms Without Examining the Stools.—*Presse Medicale* states that De La Fuente points out two signs which diagnosticate intestinal helminthiasis without examining the stools. One is the occurrence of colicky attacks, coming on very suddenly, seizing the child in the midst of play; they are quite severe at the outset, and confined to one part of the abdomen. All the rest of it may be palpated without causing the slightest pain, but the moment the seat of the colic is touched the child will cry. The other is bilateral narrowing of the visual field, usually so pronounced as to be detected by passing the finger to and fro before each of the patient's eyes. This second sign, of course, can be turned to account only in the case of children who have attained a certain age.

TWELFTH CENSUS OF THE UNITED STATES VITAL STATISTICS.

Physicians and students of mortality statistics will be interested in learning of the work now being accomplished by the Chief Statistician of Vital Statistics of the United States Census, by the authority of the Director, Hon. William R. Merriam. It is a practical effort, necessarily of limited scope, to secure the adoption of a uniform certificate for the return of deaths and looking toward the establishment of a common national system of collection of vital statistics for the purpose, primarily, of the census tables and publications.

The Director of the Census confidently expects that physicians everywhere will appreciate the desirability of the new order of things, and that they will earnestly and actively co-operate in securing prompt and accurate mortality returns of the uniform character required by Congress and sought for by statisticians. He recognizes the fact that failure on the part of physicians to give vitality to the common standard by carefully reporting the items that may be new to their certificate will be fatal to the end in view.

Vaccination Without a Cicatrix.—Lowe (*Lancet*) believes that vaccination can be effected without producing a mark. The marks are a palpable proof that the operation has been non-antiseptic. To prevent a vesicle that is fully formed from going on to the formation of pus, he applies, by means of a fine camel's hair brush, a solution of pure carbolic acid on the seventh or eighth day, the surrounding skin having been previously protected with salad oil. A few seconds after this application tepid water is poured over the spot and a piece of antiseptic wadding is applied and strapped on lightly. The scab separates without a trace of suppuration, and, therefore, without leaving the faintest cicatrix. It is believed that the protective influence of the vaccine is not in the least diminished by this treatment.

The Urine as a Diagnostic Factor.—Dr. Kernode *Tri-State Med. Jour., p. 369*, Aug. 1898. *Amer. Med. Surg. Bull.*), concludes an article with the above title with the following succinct rules, first formulated by Dr. Formad and verified by many investigators:

1. Sediment in the urine has no significance unless deposited within twenty-four hours.
2. Albumin in the urine does not indicate kidney disease unless accompanied by tube-casts. The most fatal form of Bright's disease—contracted kidney—has little or no albumin.
3. Every white crystal in urine, regardless of shape, is a phosphate, except the oxalate of lime crystal, which has its own peculiar form; urine alkaline.
4. Every yellow crystal is unic acid if the urine is acid, or a urate if the urine is alkaline.
5. Mucous casts, pus, and epithelium signify disease of the bladder, cystitis or of other parts of the urinary tract, as determined by variety of epithelium.
6. The urine from females can often be differentiated from the urine of males by finding in it the tesselated epithelium of the vagina.
7. Hyaline cast (narrow), blood, and epithelial casts signify acute catarrhal nephritis. There is much albumin in this condition.
8. Broad hyaline casts and epithelial dark-green granules and oil casts signify chronic catarrhal nephritis. At first, much albumin; latter, less.
9. Hyaline and pale granular casts and little or no albumin signify interstitial nephritis.
10. Broad casts are worse than narrow casts, for the former signify a chronic disease.
11. The urine should be fresh for microscopic examination, as the micrococci will change hyaline casts into granular casts, or devour them entirely in a short time.
12. Uric acid may, in Trommer's test for sugar, form a peroxide of copper, this often misleading the examiner into the belief that he has discovered sugar. Thus, when urine shows only sugar, other methods of examination must be used—preferably, the lead-test.
13. The microscope gives us better ideas of the exact condition of affairs in examination of urine, than the various chemical tests.

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"One ought every day at least to hear a little song, read a good poem, see a fine picture, and if it were possible to speak a few seasonable words." GOETHE.

THE LESSONS OF THE HOUR.

THERE are times when some of the great lessons of life are brought out with such clearness and force that they cannot fail to leave an indelible impression upon every reflecting mind. The recent pageant, in which the hundreds of thousands of people who thronged the harbor and rivers and broad avenues of our city and rent the air with enthusiastic shouts as the heroes of our naval victories passed before them, had a deeper meaning than a mere admiration for individual courage and skill, coupled as they were with a success which startled the world with a revelation of strength never dreamed of before. With the thrill of patriotic pride which touched every heart, and the intense admiration for daring deeds worked out with unfaltering courage and a skill trained by the closest study and ample practice, came the great lesson that these heroic men were only one factor in the great contest. Back of them was the nation with its forethought, its preparation of ships constructed with such scientific knowledge and such perfection of material that every part was best adapted for its specific work for offense and defense; of artillery, as perfect as human ingenuity could devise; all controlled by men trained to their work, taught in the scientific schools through which they had passed to think logically and act promptly in any emergency in which they could be placed. The Spanish navy was not lacking in courage, but they were lacking in the perfection of the machinery of war and the actual training in its use which made our forces invincible.

In all this we do not fail to recognize the great lesson that success, not only national, but in every department of life, depends in a great measure upon thorough training and the ab lity to utilize the very best material that can be obtained, with the greatest possible skill to accomplish the desired results. In the no distant future, possibly, arbitration may take the place of armies and navies, but until with all the great nations the council chamber supplants the battlefield, science and money must be taxed to the utmost to make them as complete and destructive as possible.

The great lesson which has been so strongly impressed upon our mind—"What you have to do see that it is well done"—applies to individual action in every calling and in every profession in life. A general knowledge of the subject is not sufficient; but the mind must be so disciplined that every principle and every fact must be stored away in its proper receptacle in the brain, to be drawn out at will to be united with other facts, as the artist combines the notes in the musical composition to produce the most harmonious results.

Occasions constantly arise, especially in our profession, when success can only be obtained by breaking away from the traditions of the schools and acting on the promptings of our own judgment; but that judgment must be in touch with the logical training of the mind, and the ideas picked up here and there in the vast field of experimental research. To be successful, never lag in the background, never let the mind grow rusty from lack of work, but always be fully alive to the teachings of science and the resources of nature.

But there is another lesson which this glorious season of autumn teaches us with its cool breath, laden with life-giving ozone and the gorgeous coloring of its foliage, and that is life in the open air, with the exercise which keeps the blood in vigorous circulation, the brain clear, and the digestion doing its faithful work. To the anæmic, the dyspeptic, the weary brain, the exhausted nervous system, now is the time to throw into the lap of nature the ills and weariness of the past and take on its mantle of strength. The heat of the summer with all its depressing influences is over, and winter with its bleak winds and wild storms not far in the future. This is not the time for drugs, or close rooms, or doctors, except the greatest of all—nature. Throw yourself in its arms and see if you cannot realize in

the poetic dream one of the most perfect lessons of your life.

"I love to wander through the woodlands hoary
In the soft light of an autumnal day.
When summer gathers up her robes of glory,
And like a dream of beauty glides away.

"How through each loved, familiar path she lingers,
Serenely smiling through the golden mist,
Tinting the wild grape with her dewy fingers,
Till the cool emerald turns to amethyst!

"Kindling the faint stars of the hazel, shining
To light the gloom of autumn's moldering halls,
With hoary plumes the clematis entwining
Where o'er the rock her withered garland falls.

"Warm lights are on the sleepy uplands waning
Beneath soft clouds along the horizon rolled,
Till the slant sunbeams through their fringes raining,
Bathe all the hills in melancholy gold.

"The moist winds breathe of crisped leaves and flowers
In the damp hollows of the woodland sown,
Mingling the freshness of autumnal showers
With spicy airs from cedarn alleys blown.

"Beside the brook and on the umbered meadow,
Where yellow fern-tufts fleck the faded ground,
With folded lids beneath their palmy shadow
The gentian nods in dewy slumbers bound.

"Upon those soft, fringed lids the bee sits brooding,
Like a fond lover loth to say farewell,
Or with shut wings, through silken folds intruding,
Creeps near her heart his drowsy tale to tell.

"The little birds upon the hillside lonely
Flit noiselessly along from spray to spray,
Silent as a sweet wandering thought, that only
Shows its bright wings and softly glides away."

"THE SCIENCE OF MEDICINE AND ITS RELATION TO THE PEOPLE."

WE are indebted to Henry Jameson, B. S., M. D., Professor of Principles and Practice of Medicine and Dean of the Faculty of the Medical College of Indiana, Indianapolis, for a reprint of his address upon the above subject, and while we could not be expected to concur with all he says, we will admit that we are in accord with its general scope and heartily agree with many of his conclusions, especially those in respect to sectarianism in medicine.

We will quote some points of the address which appear to us particularly strong in their logic. He says: "It is only those who are free indeed that can come from out of the shadow of the mystery of life and be ready with aweless minds to face the full light of the truth on their horizon. The average man does not want to know, does not want to see. He clings with almost infantile eagerness to the undefined feeling that results are accomplished mysteriously; that hocus-pocus instead of reason guides a cure. Strong men, who bear their full share of the burden of life like men, learn of some physical disability that assails them, and are yet afraid to know its extent or to be told their actual condition. Every physician knows of many such cases. They illustrate the fund of fear on which fraud relies with confidence, and out of which charlatanism finds the substance of its prosperity."

His statements in respect to speculative dogmatism and "Schools," will be found acceptable to the advanced thinker, and we concur in his remark that "It is accepted as a matter of course that the regular physician is a believer in "all pathies," and that he simply differs from a practitioner of a special pathy in having more of them. Astonishing as this statement is when boldly made, I am convinced that reflection on it will win belief in its truth. The whole mass and currency of general thought regarding medicine is sullied and vitiated by this false conception. . . . In science, where rules are exact, and are nothing if not exact, the newspaper dogmatizes continually, the most dogmatic of its dogmas being the assumption that science itself is a dogma!

"Imagine a sectarian work on mathematics! Imagine engineering or electricity according to a pathy! Fancy a waterworks expert announcing himself as a pathy engineer—as a man who judged of grades and resistances, of gravity, of evaporation, according to a certain pathy! Fancy an electrician who proposes to wire your house or supply you with a battery according to a certain pathy of electricity! Think of an institution that would teach mathematics according to a certain dogma! To propose such things as these is at once to win assent to their utter preposterousness. And yet the minds that would gladly give such assent gravely talk of the science of medicine as a pathy. . . .

"Is it too much to ask of the general standard of intelligence to know that medical science stands precisely where the science of electricity or mathematics stands, and that, though partly empiric, it is exact?"

If those who have distinguished themselves as "pathists" would resolve to begin the new century with the simple cognomen of "physician" and offer their experience without sectarian designation, defending it in debate in a respectful way and upon scientific grounds, they would find that their statements would be received in the spirit in which they are offered, and if found to be correct, would soon be adopted by the profession as a body, regardless of theory or source.

So long, however, as they prefer to classify themselves as a distinct sect, just so long will they remain outside the pale of ethical medicine, because it is derogatory to the physician to thus designate him-

self. It does not object to theories, ideas or facts, only to sectarian names. If each individual would act for himself, by dropping all fellowship of this class, medical unity would soon be accomplished.

CHRISTIAN SCIENCE.

THE Health Inspector of Chicago reads the Christian Scientists a lecture, in which he states some plain facts, telling them they contribute more to the present prevalence of diphtheria and scarlet fever than any other circumstance or combination of circumstances. If they choose to starve or neglect themselves, and do not harm their neighbors, the law will let them alone, but it they imperil public health, the law will have something to say. "The peculiar belief," the Inspector says, "that teaches us to cover our eyes and call upon the Lord to do the work of the doctor and sanitarian, has helped ignorant parents in the work of spreading the contagion of the preventable contagious diseases. The beauties of this method of treatment are to be found only in the wealth of flowers placed upon little graves." Some of the principles of the so-called Christian Scientists are undoubtedly worthy of the most careful consideration, but when they are made the basis of an exclusive system, with an interpretation often illogical, the system, as a system, becomes an element of danger so great that its working in its details should be carefully watched by the legal guardians of the public health. A recent number of the *Outlook* gives a telling illustration of the danger of calling in Christian Science in a large and varied class of diseases.

"Suppose a Mormon were to set up as a pilot, claim divine guidance, and insist on his right to take steamships in and out of New York harbor on the strength of his proficiency in the Book of Mormon, would it be a violation of the liberty of the individual to prohibit and put him in jail if he persisted? Yet the danger to the community from incompetent pilotage of an ocean steamer would not be so great as the peril from incompetent treatment of certain contagious and other diseases." Does any person at all familiar with disease, or the many so-called accidents in life, for a moment believe that a three weeks' course of training, which is all Mrs. Eddy's system requires, is sufficient to constitute a good pilot along the stream of life? No one realizes the fact better than the physician that many patients would get well without medical aid. Childbirth, for instance, is not a disease, but the operation of a normal function, often requiring no other attendance than that of an intelligent nurse, for which a Christian Scientist would probably be as good as any. But, supposing there is placenta previa, or abnormal presentation, would Mrs. Eddy's three weeks' training qualify the Christian Scientist to meet the requirements of the case. It is for the exceptional cases requiring the most intimate knowledge of the subject that the very highest skill is required to save life, and that can hardly be expected in the ranks of Christian Scientists.

DISPENSARY LAW.

THE State Board of Charities have adopted the rules and regulations for the government of dispensaries, under the new law which went into operation the beginning of last month, which it is hoped will, in a great measure, do away with the abuses which have heretofore been connected with such institutions. Hereafter no dispensary can secure a license without filing a reply to a set of searching questions. The rules provide that two women be appointed on all boards of managers in institutions treating women and children. The visiting and assistant physicians and surgeons shall serve three years, that young and active practitioners may have an opportunity to enter the service.

The new rules create the office of "registrar," who is to receive all applicants, and supervise the work of the institution. They also provide for a matron, who is to give attention to women patients, in addition to keeping the institution in order.

All emergency cases and the needy poor are to receive immediate treatment. Where there is doubt as to the inability to pay, the registrar must cause an inquiry to be made and the result filed. Admission must be refused to applicants refusing to sign the required declaration, and pass cards must contain the penal provision of the law. In large cities it is suggested the investigations be made through the charities organizations. The rules also provide that no patients may be utilized for clinics without their consent.

DIVORCE.

THE divorce question is now receiving marked attention by the high dignitaries of the church, but it is doubtful whether the plan proposed by them will work out any practical results. The law recognizes marriage as a civil contract, equally binding from a legal standpoint whether blessed by the church or not. In a recent editorial we referred to the greater equality of the sexes as all important in the development of the human race. Is it not a self-evident proposition,

that the best way to prevent divorce is to prevent people from wanting to be divorced? Would not this end be better accomplished by ignoring the theory of the subordination of woman to man than by any edict of the church? It has been well said that the two great foes of domestic happiness are frivolity on the part of women and licentiousness on the part of men. Whatever tends to make women more thoughtful and broad minded tends directly to increase the happiness and stability of the home. So does everything that tends to make men believe in an equal standard of right and wrong for themselves and their wives. In this connection the fact is one of interest, that while in the country at large divorce has been increasing so fast that it is noteworthy, Wyoming, the only State in the Union which has been fully committed to equal suffrage for a generation, shows a relative decrease.

HYPNOTISM AS A LEGAL DEFENSE.

ONE of the strangest defenses ever offered in a court is that made by the Edison Electric Illumininating Company, of Paterson, N. J., in a suit against it. The plaintiff alleges that during a storm he was struck by a falling arc light wire, and seriously injured. He was taken to the General Hospital at the time and was a patient there for three months.

It is admitted by all the physicians who have testified that he displayed all the symptoms which usually follow such a shock, but they deny that there was any burn on his body to indicate that he had been touched by a wire. The defense is that Frankel never came into contact with the wire at all, and that his illness after the supposed accident has been due entirely to hypnotic suggestion, the patient being at one and the same time the operator and the subject.

The medical testimony, given, not by hypnotists, but by practitioners of the best repute, was the strangest feature of the case. Dr. William K. Newton, who is in the front rank of Paterson's medical fraternity, and who is physician to Vice-President Hobart, testified that he examined Frankel at the hospital and reached the conclusion that his illness was the result of hypnotic suggestion.

Moreover, he made several tests that indicated the correctness of the view. He bathed the arms of the patient in hot and cold water alternately, telling him that the hot water was cold and that the cold water was hot. In every case Frankel believed that the water was of the temperature that he was told it was. Dr. Todd testified that he performed a further and more remarkable test. He placed cold water on the arm of Frankel, telling him that it was a powerful acid, and that it would burn. Frankel evidently suffered the greatest pain during the application and for some time afterward.

The defense is considered by many able scientists an excellent one.

NAME CENTER.

THE localization of the different faculties of the brain has opened the way to more specific treatment than could otherwise be obtained. Several years ago an Austrian savant said the brain of man contains a name center, which was located beneath the temple in the upper temporal lobe of the brain. A case has recently occurred in Cleveland confirming the truth of the statement. A brakeman was shot by the conductor and taken to the hospital. The mind seemed to be clear on every subject but one—he could not remember the name of anything. He gave an accurate description of the man who had shot him, but the man's name had gone from him. He could not tell his own name. Then began a series of experiments. A comb was held before the wounded man. He could tell the use of the article and describe the action of using it, but not its name. A spoon, knife, teacup and other objects were used as tests, but with the same result.

Two diagnoses were made, one on the accepted physiological lines, and the other on the Austrian hypothesis. They probed first on the first diagnosis and failed to fiind the bullet, that diagnosis indicating it was in the lower temporal lobe. It was not there. They probed on the other diagnosis and found it in the exact spot necessary to affect the remembrance of names, according to the Austrian theory.

When the pressure on the brain had been relieved the patient remembered names as well as he had done before his injury, and told the name of his assailant.

DECREASING FATALITY OF DISEASE.

DR. SAMUEL W. ABBOTT, of the Massachusetts Board of Health, gives an interesting and suggestive statement, which he presumes is in a measure true of other States, showing that diseases are every year less dangerous to human life. In that State there was fewer deaths from infectious diseases by 1,203, notwithstanding a marked increase in population, than during the previous year, or any other year during the past half century. The number of deaths from diphtheria decreased one-half, scarlet fever more

than one-half, consumption 5 per cent. less, and measles reduced more than one-half. The death rate was reduced to eighteen per thousand from about nineteen for half a century. There was a slight increase in typhoid fever and cholera infantum. This excellent showing is undoubtedly owing, in a marked degree, to improved sanitary conditions, stricter quarantine regulations, and a better understanding of the cause and treatment of various diseases. The rate of improvement should steadily increase with the ever increasing facilities for good work.

A NEW INDEX MEDICUS.

THE *Medical Review of Reviews*, which has been publishing a valuable Index Medicus of American periodicals, proposes, in its September number, to add thereto "all the leading journals of Europe, classifying the articles under the different heads, as has been successfully done by the Index Medicus, now unfortunately suspended, in such a way as to fill the position of that invaluable journal." We cannot doubt that the editor's appeal to his confrères for their aid in carrying out this praiseworthy enterprise will be promptly responded to, so as to insure for it the fullest measure of deserved success.

CONTRACTED PELVIS IN AMERICAN WOMEN.

UNLESS our memory is at fault, it used to be a matter of general belief, attested by all obstetrical authorities, that cases of contracted pelvis, rendering natural delivery difficult or impossible, were of rare occurrence among American women, as compared with those of other lands. This idea was undoubtedly correct as far as the earlier settlers were concerned, flourishing as they did under conditions eminently favorable to the fullest physical development of both sexes, especially in the reproductive sphere. But apparently we can no longer boast of such a superiority over older communities. Dr. J. Whitridge Williams, in an exhaustive article upon his subject in May, 1899. *Obstetrics*, analyzes a series of obstetric cases treated at Johns Hopkins Hospital. He compares his pelvic measurements of these women with others made in Europe. Following is the summary of his studies, and they embody all that is of practical use in his interesting paper :

1. In our material, the frequency of contracted pelves (13.1 per cent.) corresponds very closely with the general average of frequency observed in Germany.

2. This is due, in large part, to the presence of a large black population in Baltimore, 469 out of 1,000 cases being colored women.

3. Contracted pelves are 2.77 times more frequent in black than in white women, and occur in 19.83 per cent. of the former and 7.14 per cent. of the latter.

4. The statistics of Reynolds, Crossen and myself indicate that contracted pelves are observed in about 7 per cent. of the white women of this country, or about once in every fourteenth case.

5. Contracted pelves, accordingly, occur in our white women about as frequently as in many German clinics, notably Rostock, Breslau and Basel.

6. They occur quite as frequently as in Paris (Pinard and Budin) and more frequently than in Vienna.

7. As every fourteenth white and every fifth colored woman possesses a contracted pelvis, the necessity for routine pelvimetry becomes apparent.

CLINICAL LECTURES ON SKIN DISEASES.

THE profession will be glad to learn that Dr. L. Duncan Bulkley will commence a second series of clinical lectures on "Diseases of the Skin," in the out patients' hall of the hospital, corner Second avenue and Nineteenth street, commencing Wednesday afternoon, November 1, at 4:15 o'clock. The high standing of Dr. Bulkley in his specialty, and the abundance of clinical material at his disposal in the Skin and Cancer Hospital, will insure a course of lectures of great practical value. These lectures will prove of special interest not only to the student but to the general practitioner, and will be entirely free to the medical profession.

PHARMACOPÆIA REVISION

AS the time rapidly approaches when a revision of the Pharmacopæia will be in order, many questions naturally arise as to whether its scope and detail can be improved upon, in order to keep it abreast the times, as well as to increase its sphere of usefulness.

It has been proposed that minimum and maximum doses should be incorporated, and we have often wondered why they were not, in order to add to its value and popularity. There is certainly good reason why its character should be changed if possible, in order to bring it into more general use.

The book has not heretofore found its way into the hands of physicians because there was little in it of service.

It did not even give him the dosage which he was looking for. We would suggest that the Committee on Revision examine Merck's Index, with a view of incorporating the plan in use there for

giving the salient points of drugs in a nutshell, with such practical suggestions and precautions as may seem best to enhance its value as a work of reference. It is no excuse that these facts may be found elsewhere, as in the Dispensatory, or in works on therapeutics; it is to increase the value of the Pharmacopœia that we are considering.

It seems to us that the Pharmacopœia was made exclusively for those who manipulate drugs, but even the compounder needs to be reminded of precautionary measures which experience may dictate, and other characteristic points which might enable him to correct an error in a hastily written prescription, and perhaps save a valuable life.

If the book is to continue the same scope as in the past, its sphere of usefulness need not expect to be increased, but make it a compendium of the Dispensatory, with some additions, and the volume will reach the hand of every physician as well as every pharmacist in the country.

CANCER.

EVERY year new remedies are suggested for this disease, which is looked upon by the public and the profession with so much anxiety and dread, and every year records the partial or entire failure of the remedy suggested to produce the desired effect. Prof. James H. Etheridge, of the Rush Medical College, has recently recorded the favorable result of some experiments made with *calcium carbide* in the treatment of uterine cancer. Calcium carbide is a product made from a fusion of lime and carbon under a strong electric heat, which, decomposed by a little water, gives off in abundance acetylene gas, now extensively used in lighting. The first case upon which the new agent was tried was that of an old lady in which the cervix was entirely gone. The cavity of the uterus was curetted and a piece of carbide was inserted. There was an instantaneous boiling, such as we sometimes see with the peroxide of hydrogen, but more violent. The elimination of gas was abundant and painful for a few hours. The cavity was packed with iodoform and left for three days, when the hard mass was found reduced to a clay. At the end of five or six treatments at three days' interval the cancerous ulcer seemed converted to a simple ulcer which was treated with powdered carbide until the ulcer entirely disappeared. Three months after the parts were in apparently a healthy condition. The case quoted is a type of several others which were treated with the same result. Under the influence of the carbide the offensive discharge and the hemorrhage cease, the appetite increases, and the system seems in every way better nourished. The experiments with the carbide and the liquid air, now being made with great care, may possibly reveal a class of remedies which will place this usually fatal malady in the class of curable diseases.

THE bubonic plague has reached Oporto. All the experiments with the Pasteur serum have been completely successful, and not one death is reported among the plague-stricken treated by this method. The entire French colony of the town and the *personnel* of the Consulate have been vaccinated by Dr. Calmetti. In the plague hospital of Bonsom the patients seem to be doing well.

THE Board of Health of Michigan states that twenty clerks in that State who were working over volumes of records were taken ill with consumption and died.

The books were examined by a bacteriologist, who found them full of tubercular bacilli. It is thought that they became infected from a clerk who had consumption and the habit of moistening his thumb with saliva when he turned a page.

THE recent action of the Wayne County Medical Society in reference to States' reciprocity is being endorsed by many States. The last are the Utah State Medical Society and the New York State Medical Association, who have appointed committees to bring about this much desired end. The lines marked out by the Wayne County Medical Society have been received with so much approval as to warrant a belief of speedy success.

DR. ANGELO MOSSO, of Turin, recently visited this country and gave a course of lectures at Clark University. A Rome correspondent of the *Lancet* quotes from a letter of Dr. Mosso a very complimentary estimate of physical education in the United States. "It is enough," he writes, "to look at the passers-by in the American streets to be convinced how much more developed and strong they are than our compatriots. The boys and girls are in point of physique far superior to ours. All the public take interest in physical exercises—every journal being compelled to report athletic competitions, regattas, football encounters, golf matches, and such like, because its readers have even a greater enthusiasm for those topics than for the strife of parties. America teaches us, by the plainest and most impressive of examples, that physical

education may be carried to perfection without any military object. In the States no one dreams of becoming a soldier. If military force is required it is provided, as in Great Britain, by voluntary enlistment. Nevertheless, America and the British Isles are precisely the two countries where physical education has reached its highest development."

BIBLIOGRAPHICAL.

Archives of The Roentgen Ray. The only journal in which the transactions of the Roentgen Society of London are officially reported. Edited by Thomas Moore, F. R. C. S., and Ernest Payne, M. A. (Cantab) and a committee. February, May and August, 1899. W. B. Saunders, Philadelphia.

Invaluable to all workers in this department.

Minor Surgery and Bandaging. By Henry R. Wharton, M. D., Demonstrator of Surgery in the University of Pennsylvania. New fourth edition. In one 12mo volume of 594 pages, with 502 engravings, many being photographic. Cloth, $3.00, net. Lea Brothers & Co., Philadelphia and New York.

This volume includes the treatment of fractures and dislocations, the ligation of arteries, amputations, excisions and resections, intestinal anastomosis, operations upon nerves and tendons, tracheotomy, intubation of the larynx, etc. The subject matter has been carefully revised for this edition and much new matter added, including a chapter upon Surgical Bacteriology. The book also contains brief descriptions of operations upon the cadaver, making it useful as a hand-book to the medical student. It is evident from the promptness with which the various editions have been absorbed, that the work has met a popular demand.

The position of the author as a teacher in one of the best medical schools in the country is sufficient guarantee that his effort is standard. The physical part of the work is all that could be desired.

The article on "Wireless Telegraphy" in the present number of *Current History* is worthy of special attention, as it makes the whole subject plain to the average reader. The Marconi and other systems of wireless communication are described in plain and simple English; the history of previous attempts is traced, and the practical utilities and possibilities, as well as the difficulties still to be overcome, are fully shown. The text is illustrated with numerous diagrams of apparatus, and a full-page portrait of Marconi.

Boston, Mass.: Current History Co., $1.50 a year. Single numbers 40 cents. Specimen pages free.

A Text-Book of Physiology. By Winfield S. Hall, Ph. D. (Leipzig), M. D. (Leipzig), Professor of Physiology, Northwestern Medical School, Chicago; Member of the American Physiological Society; Fellow of the American Academy of Medicine. Illustrated with 343 engravings and six colored plates. Lea Brothers & Co., Philadelphia and New York, 1899; pp. 671, octavo.

This is the only book we know of which presents the subject of which it treats concretely within its own proper boundaries, and in its instructive connections with the sciences whence it is derived, viz., anatomy, chemistry and physics.

The author has summarized from this standpoint those principles which have a general application, with a prefix to each chapter covering the facts which are to be applied in the text which follows. This plan enables the author to confine the subject matter of each chapter strictly to physiology, in a logical manner.

The text is adapted to all classes of students in this department, is as concise as possible, and contains clinical applications of physiological phenomena worthy the study of the experienced practitioner. The subject is thoroughly brought down to date, and is shorn of the non-essentials which encumber so many works of this class. There is an urgent demand for just such a book. The physical part of the work is in the publisher's best art.

American Pocket Medical Dictionary. Edited by W. A. Newman Dorland, A.M., M.D., Assistant Obstetrician to the Hospital of the University of Pennsylvania; Fellow of the American Academy of Medicine, etc. Containing the pronunciation and definition of over 26,000 of the terms used in medicine and the kindred sciences, along with over sixty extensive tables. Second edition, revised, $1.25, net. Philadelphia: W. B. Saunders, 1899.

The fact that a large edition of this little book has been exhausted in six months, and a second demanded, is sufficient evidence of its value.

A Compend of Gynaecology. By William H. Wells, M. D., Adjunct Professor of Obstetrics and Diseases of Infancy in the Philadelphia Polyclinic; Instructor of Clinical Obstetrics in the Jefferson Medical College; Fellow of the College of Physicians of Philadelphia and of the Gynæcological Section thereof; late Assistant in the Out-patient Gynæcological Department of the Jefferson Medical College Hospital, etc. With illustrations. Philadelphia: P. Blakiston, Son & Co., 1899, pp. 279; 12mo. Second edition.

This excellent little volume has been revised to keep it abreast the times, and it will continue to hold its place as a popular compend in this department of medicine.

A Compend of the Practice of Medicine. By Daniel E. Hughes, M. D., Chief Resident Physician, Philadelphia Hospital; Physician-in-Chief, Insane Department, Philadelphia Hospital; late Demonstrator of Clinical Medicine in the Jefferson Medical College of Philadelphia, etc., etc. Sixth physician's edition, thoroughly revised and enlarged, including a section on mental diseases and a very complete section on skin diseases. Philadelphia: P. Blakiston, Son & Co., 1899, pp. 625; 12mo; $2.25.

This is the book *par excellence* for the busy general practitioner. Of course it is only suggestive, and will lead to the study of more extensive treatises as required. *It is just what the physician wants constantly at hand.*

The section on mental diseases will be found a great convenience.

The fact that this is the sixth edition shows with what favor the work has been received.

Diseases of Children. By George M. Tuttle, M. D., Attending Physician to St. Luke's Hospital, Martha Parsons Hospital for Children, and Bethesda Foundling Asylum, St. Louis. Illustrated with five plates in colors and monochrome. Lea Brothers & Co., Philadelphia and New York; pp. 386; octavo.

This book belongs to the pocket series of text-books edited by Bern B. Gallaudet, M. D., of the College of Physicians and Surgeons of New York, and this makes them standard with the best medical colleges. These books are written with the requirements of the beginner in study uppermost in view.

The aim in such a work is of course to make the text concise, clear and systematic, in order to enable ease of study and reference. The author has succeeded admirably in his effort, and the publisher has done the rest perfectly.

Vital Science Based Upon Life's Great Law, the Analogue of Gravitation. Agnosticism Refuted. By Robert Walter, M. D., Walters Park, Pa. Philadelphia: J. B. Lippincott Company, 1899, pp. 319; octavo.

We learn from the preface that "the underlying thought of this work is that the living world is a fundamental department of natural existence, and is, therefore, subject to a fundamental law, perfectly analogous to Chemical Affinity and Gravitation. This law is proved by the results to have really been discovered, and its applicability to a Science of Human Health been demonstrated, making the knowledge

of vital processes in both health and disease to be as certain as the knowledge of chemical and astronomical processes."

The text is devoted to the proof of the above statements, with frequent reference to Biblical literature. There is much that is good and true in these pages, and worth reading by such as are interested. The volume is to be followed by another, in which the processes of healthful living will be explained, and this no doubt will be of more interest to the practical and busy practitioner.

THE CEREBRO-SPINAL FLUID. ITS SPONTANEOUS ESCAPE FROM THE NOSE. With observations on its composition and function in the human subject. By St. Clair Thomson, M. D., M. R. C. P. Lond., F. R. C. S., Eng., Physician to the Throat Hospital, Golden Square; Surgeon to the Royal Ear Hospital, London. Cassell & Company, Limited, London, Paris, New York and Melbourne, 1899, pp. 140; octavo.

This little volume contains the analysis of twenty-one cases of this rare affection, and the study will be of great interest, particularly to specialists in this department, and it cannot fail to interest the general practitioner, who will as a rule be the first to see such cases.

The subject is very clearly set forth and elucidated.

THE College Man's Number of *The Saturday Evening Post*, of Philadelphia, though planned primarily to appeal to university men, past and present, will interest all who care for the short story at its best. Robert W. Chambers, in "The Spirit of the North," tells of the adventures of a party of Columbia naturalists and their quest of the dingue —hitherto supposed to be extinct—in the unknown country behind the Hudson Mountains. The story is a rather remarkable combination of exciting action and inimitable humor. Charles Macomb Flandrau (author of Harvard Episodes) contributes "Prince Protococoff and the Press Club," an irresistibly funny episode of Cambridge life. Jesse Lynch Williams (author of Princeton Stories and The Stolen Story) chronicles "The Great College-Circus Fight" between Princeton students and a passing Wild-West Show; and Arthur Hobson Quinn (author of Pennsylvania Stories) tells the story of "The Last Five Yards."

Among other contributors to the number are President Benjamin Ide Wheeler, who discusses the regulation of college athletics; Thomas Wentworth Higginson, who describes the college life of our grandfathers, and President Nathaniel Butler, of Colby College.

ELECTRO-HÆMOSTASES IN OPERATIVE SURGERY. By Alexander J. C. Skeine, M. D., L.L. D. D. Appleton & Co.

This volume may be considered a supplement to the third edition of the author's work on diseases of wo en, in which the subject was only briefly discussed. The recent improvements in instruments and in the technique of operating, and a larger experience confirmatory of the value of the principle and practice advocated, render the work timely and valuable

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A TREATISE ON SURGERY. By American authors. Edited by Roswell Parks, A. M., M. D. Condensed edition with revisions, with 625 engravings and 37 full page plates in colors and monochromo. Lea Brothers & Co.

In our notice of the two volume edition we stated that it was one of the best works on surgery ever published. Dr. Parks says in his preface to this edition that "the great demand for the work in its two volume form brought with it sufficient indication to warrant the belief that a condensed edition in a single volume and at a correspondingly lower price would add to its popularity" The reduction in price is proportionately much greater than that of matter. That two editions of the same work should be simultaneously extant is a novelty worthy of comment.

THE *Century Magazine*.—In its November number, which ushers in Mr. John Morley's "Oliver Cromwell," the *Century Magazine* will make a notable departure. The illustrations of Mr. Morley's work and for the text of Ernest Seton-Thompson's "The Biography of a Grizzly," will be done in color. Not only this, but the reading matter and some of the pictures of these and other articles and stories will be arranged in a manner, we believe, so far unique in magazine publication. The frontispiece, which is engraved by T. Johnson from the portrait of Cromwell by Samuel Cooper, and the reproductions of some of Van Dyck's portraits, which accompany the opening pages of "Cromwell," appear particularly fine and rich in color. A serial by Dr. Weir Mitchell, "The Autobiography of a Quack," will be commenced in this issue; also "My Debut as a Literary Person," by Mark Twain.

THE TREATMENT OF PELVIC INFLAMMATION THROUGH THE VAGINA. By William R. Pryor, M. D. With 110 illustrations.

This little volume is an elaboration of Professor Pryor's lectures on gynæcology to his class in the New York Polyclinic. The author in his preface says: "The spirit predominant through the book is that of an aggressive interference, yet I have generally laid down also a palliative method of treatment for each disease, to be applied where operation cannot be done. I have told what I think and do." The author shows great originality and practical ability in the discussion of every phase of the trouble treated.

PROGRESSIVE MEDICINE. A quarterly digest of advances, discoveries and improvements in the medical and surgical sciences. Edited by Hobart Amory Hare, M.D., Vol. III., September, 1899.

The diseases discussed in this volume are:

1. The thorax and its viscera, including the heart, lungs and blood vessels, occupying 153 pages, by William Ewart, M.D., F.R.C.P.

2. Diseases of the skin—100 pages—by Henry W. Stelwagon, M. D, of the Jefferson Medical College.

3. Diseases of the nervous system—70 pages—by William G. Spelter, M D., of the Philadelphia Polyclinic.

4. Obstetrics—100 pages—by Richard C. Norris, M. D., of the University of Pennsylvania.

All of the writers are teachers of eminent ability, and have given a clear picture and a judicious analysis of modern ideas and successful work in each of the subjects discussed.

MEDICAL COMPLICATIONS, ACCIDENTS AND SEQUELÆ OF TYPHOID OR ENTERIC FEVER By Hobart Amory Hare, M.D With a special chapter on the mental disturbances following typhoid fever, by F. X. Decrum, M. D. Lea Brothers & Co.

Anyone who has had even a limited experience with typhoid fever has met with cases in which the manifestations were so far from the clinical descriptions of the disease as to be puzzling and obscure, or with instances in which the malady has been so altered in its course by intercurrent affections as to be unusual and to call forth all the diagnostic knowledge and therapeutic skill of the physician. This volume deals very intelligently with these aberrant forms of the disease and the courses they pursue. The chapter on the mental disorders, which complicate typhoid fever, by Dr. Dercum, is of great interest and adds materially to the value of the work.

THE NERVOUS SYSTEM AND ITS CONSTITUENT NEURONES Designed for the use of Practitioners of Medicine and of Students of Medicine and Physiology. By Lewellys F. Barker, M. B., of the Johns Hopkins University. With two colored plates and 676 illustrations in the text. D. Appleton & Co, 1899.

In the first part of the volume the newer conceptions of the histology of the central and peripheral nervous organs are reviewed. In the succeeding chapters the attempt has been made to apply the neurone conception—that is the cell doctrine—as consistently as possible, in the explanation and description of the complex architectonics of the nervous system. The term neurone is used in the strictest sense to mean a *cell belonging to the nervous system with all its parts*, not in the more restricted sense in which many authors employ it, and to which objection has been taken in many quarters The illustrations are well chosen, and illustrate the various subjects discussed with much more clearness than any mere verbal description could

give. The study of the nervous system during the past few years has developed so many new and most important points in reference to its structure and action, which render a work of this kind which covers the whole field up to the present, timely and of great value, not only to the student but also to the general profession.

A LABORATORY MANUAL OF PHYSIOLGICAL CHEMISTRY. By Elbert W. Rockwood. B. S., M. D., Professor of Chemistry and Toxicology in the University of Iowa. Illustrated with one colored plate and three plates of microscopic preparations. Extra cloth, $1, net. The F. A. Davis Co., publishers, Philadelphia.

There is no doubt of the superiority of laboratory instruction over didactic in rendering the student familiar with the physiological changes in progress in the animal body and their products. The book is an excellent one, and has been prepared to impart knowledge through the student's own observation. The subjects discussed, with experimental illustrations, include all the important ones of physiological chemistry. The instructions are so clear, that with a little previous knowledge of chemistry the experiments can be made with great satisfaction by any student in his own laboratory.

THE Thanksgiving *Ladies' Home Journal* presents itself in a seasonable and attractive dress, and is a number of unusual excellence. In its practical features and departments consideration has been given to every need of the home. There are suggestions for Christmas presents instruction in china painting, cooking, lace-making, domestic economy, the newest things in woman's attire are shown, and new games and entertainments presented. Among the literary features of general interest are: "How the Next Census Will Be Taken," "How a Play Is Written" and "The Anecdotal Side of Robert E Lee." Rev. Charles M. Sheldon, author of "In His Steps," contributes an article, "Is Christianity Practical in Worldly Affairs?" and Sir Henry Irving writes on "The Study of Shakespeare in Small Communities." Mrs. Janet McKenzie Hill, of the Boston Cooking School, has been added to its domestic editorial corps, thus completing a trio of unusually strong domestic writers: Mrs. S. T. Rorer, Miss Maria Parloa and Mrs. Hill, all three of whom are now on the magazine's editorial staff. By the Curtis Publishing Company, Philadelphia. One dollar per year; ten cents per copy.

SOCIETY REPORTS.

FRENCH MEDICAL SOCIETIES.*

ACADEMY OF SCIENCES.

Relations of Angina With Articular Rheumatism.—M. Katz recalled the fact that of late the attention of physicians has been greatly drawn to the tonsils. On the one hand, they have been considered as a locality for the introduction of various infections, on the other, as organs of protection against infections that menaced the organism. Be this as it may, the relations existing between the anginæ and articular rheumatism have been repeatedly observed. Nearly one-third of the cases of rheumatism were accompanied by a more or less intense angina, the explanation of which is variously differentiated. According to M. Katz the articular disease should be regarded as a toxic effect, and not as a bacilla metastasis, whose port of entry is in the tonsils. In all cases a large number of the tonsillar affections continue local, which would indicate that the tonsils play a protective part, and exert a phagocytosic or anti-toxic action. From an etiological point of view, medical opinion has not yet reached a unit upon the subject of rheumatism. Attempts to attribute a pathogenic agent to this disease have failed. To produce rheumatism different conditions must be added to the bacillus or toxic infection; defective hygiene, damp dwellings, bad ventilation and draining, feeble organic resistance, and hereditary or acquired predisposition. The etiological history of articular rheumatism is yet to be made, but according to M. Katz angina and rheumatic polyarthritis are affections of etiological parentage, but the nature of the infection, and its mode of extension, are not sufficiently known. Angina accompanies rheumatism in 30 per cent. of cases, but in the majority of cases the angina on the one hand, and rheumatism on the other, constitute special affections not associated with each other.

*From *La Révue Médicale.*

CONGRESS OF FRENCH ASSOCIATIONS FOR THE ADVANCEMENT OF SCIENCE.

Herniary Tuberculosis—M. Ch. Faguet, of Perigueux—The knowledge of the above affection is of recent date. While it was observed by Cruveilhier, in 1862, it was left to M. Lejars, in 1889, in his work upon "Herniary and Perihernary Neoplasms" to report seven observations of it. After him, M. Jounesco collected all the cases known, eleven, and published an excellent monograph in the *Revue de Chirurgie* in 1891. Since then other cases were published by MM. Renault—Bordeaux, 1894, and C. Nudin—Paris, 1897. In the case of M. Faguet, a young man of eighteen years, without hereditary or personal pathological antecedents, was ruptured in left inguinal region. Hernia small, and seat of frequent attacks of colic. Seven months after examination showed: (1) Testicle and epididymis healthy. (2) An induration at bottom of sac. (3) Reducible enterocele, other organs normal, general health excellent. Operation for radical cure of inguinal hernia performed with usual antiseptic precautions. Intestine seemed healthy, nothing abnormal on the internal face of the sac; post operative results very good. Bottom of the sac occupied by induration of uniformly fibrous consistence; no irregularity nor nodosity. The microscope revealed marked tubercular lesions of bottom of sac. Tubercles disseminated in large numbers in the whole thickness of the derma and serous membrane, etc. Six months after operation patient returned to the hospital with all the signs of peritoneal and pulmonary tuberculosis, of which he died; diagnosis proved by autopsy. In this case there was primitive circumscribed tuberculosis of the hernial sac, which became general in spite of prompt and complete intervention.

Euphoric Medication—M. Ferrand sent a communication relative to the administration of morphine in cases of syncope, asphyxia and generally in the agony of imminent death. To avoid the danger of collapse or syncope or asphyxia, it suffices to add to a solution of morphine an agent capable of sure and rapid stimulation, which the euphoric medication supplies. Among the stimulating agents ether is the most apt to fulfill the purpose. But an euphoric action may be obtained by resorting to another class of agents, viz., the anti-spasmodic excitants, the anti-spasmodic moderators and even the contra-stimulants. These agents have this peculiarity, that they are, and in variable proportions, moderators of functional activity, at the same time that they respect or even stimulate nutritive activity. The association of ether and morphine best meets these requirements, and so, under many grave conditions, it may be utilized with happy results.

Human and Aviary Diphtheria.—M. Fèrè, of Bordeaux, continuing his researches upon the relations existing between the diphtheria of man and of birds, remarked that under this designation he comprises the pseudo-membranous affection of the fowl, and he has found the different microbes already reported by him. He has corroborated the presence of Loffler's bacillus in the membranes by showing that the ordinary anti-diphtheritic serum neutralized, *in vitro*, the action of this bacillus, and prevented the development of its toxine. M. Fèrè insists upon the possibility of the transmission of pseudo-membranous affections of fowls to man.

M. Loir, Tunis, said the facts reported by M. Fèrè show that Loffler's bacillus is met with in aviary diphtheria. But it should not be concluded that it is constant, for there certainly are great variations on this subject, according to different epidemic conditions, and especially of locality. At Tunis, Loffler's bacillus is rarely observed, and is but slightly virulent. The grave anginæ are always streptococcic, and I have never found Loffler's bacillus except in mild anginæ.

M. Bouchard: A number of facts from clinical observation have for a long time shown me incontestibly the possibility of the transmission of aviary diphtheria to man. I have treated many persons affected with diphtheria at the same time that the fowls under their care suffered greatly from an epizootic diphtheria, and I know of the coincidence of an epidemic and epizootic diphtheria in villages.

M. Rapin, Nantes: Like the buccal cavity of man, the same of the fowl contains, in the normal condition, micro-organisms, certain of which belong to the pathogenic species, such as the coli bacillus, streptococcus, etc., and especially have I cultivated a bacillus morphologically identical with that of Loffler. I have also observed a sporulated bacillus with all the characters of the tetanic bacillus.

Following the above discussion, M. Bouchard proposed that a vote be taken calling the attention of the public authorities to the dangers of epizootics of aviary diphtheria, and their possible transmission to man; the vote was unanimous.

Gastric Mucous Ulcerations During Hepatic Cirrhosis, With Fatal Gastrorrhoea—MM. Le Noir and H. Claude—A woman, diabetic, and affected with hypertrophic cirrhosis, died of gastrorrhœa. Autopsy revealed two ulcerations of mucous membrane near each other. Histological examination showed no sign of an inflammatory process. The necrosed glandular culs de sac were invaded by blood, also the cellular layer, but not the muscular. There were manifest lesions of thrombosis and arteritis, occasioned probably by an auto-intoxication from the diseased liver, complicated by renal alterations and diabetes. The case proves that in the course of cirrhosis hemorrhages of the digestive tube may occur independently of rupture of œsophageal or gastric varices. It shows, too, that ulcerations of the stomach, causing considerable losses of blood, may be determined by lesions of small arterioles of the glandular layer, outside of the local infection of the mucous membrane.

Cure of Hernia by Use of the Bicycle—M. Loir (Tunis) observed a number of cases of pre-existing inguinal hernia cured by the use of the bicycle, one of which was reported to the Academy by M. Lucas-Championnière. M. Mignon has since added nine observations of herniæ systematically treated by the bicycle, of which four were complete cures, the hernia not escaping at all from the abdomen, three ameliorated, and two negative results. It may be added that the two last were men of fifty-six and fifty-eight years, while the first were from eighteen to forty.

Diagnosis Between Cystitis and Cystalgia, Following Operations Upon the Womb—M. Desnos—Following hysterectomy or less serious uterine operations, troubles of micturition are seen and attributed to cystitis. They are most frequently not of an infectious nature, but cystalgic. After hysterectomy the bas-fond of the bladder is not supported, and a cul de sac or pouch is formed, and it is doubtless owing to this that micturition becomes difficult and painful.

Neuralgia and Tic of the Face, Connected With a Pathological Condition of the Lachrymal Passages—M. Betremieux (Roubaix) reported the history of one of his patients affected with "tic doulourex" of the face, who, after treatment by medical and surgical methods without relief, finally was perfectly cured by treatment applied to the lachrymal passages. He concluded from this case and others analagous, that neuralgiæ and tics of the face may be caused by a lesion of the lachrymo-nasal mucous membrane, and that they may be regarded as pathological reflexes. Before having recourse to surgical means to interrupt the reflex circle, examine carefully the lachrymal passages, the point of departure of the reflex.

Secondary Syphilitic Phlebitis—M. Le Noir reported two cases. In both the phlebitis appeared in the first months of infection, was of short duration, and was manifested only by pain, slight œdema, and an indurated cord along the course of the vein.

Treatment of Exophthalmic Goitre by Steady Volatization—M. Regnier (Paris) treated six cases of the above; one cured for two years, three much improved, two in course of treatment. The voltaic current regulates the heart's action, stops the heat, sweating, and diminishes the goitre.

Electrolysis of the Urethra—M. Desnos (Paris)—Two methods of electrolysis have been employed for contractions of the urethra. In the rapid one currents of greater or lesser intensity are used, and it is proposed to remove the contraction in a few moments. In the other the intensity of the current is feeble, but the applications are repeated at long intervals, and the duration of the treatment prolonged. The rapid method may produce a cure in a certain number of contractions, but if there be a real induration of great extent or multiplied, in order to remove it it is necessary to employ currents of such intensity as would endanger the future of the urethra. The slow method of Newman is very different, and its results are maintained for a long time. After ten or twelve years, M. Desnos has found urethræ that had been electrolyzed by this method subject to no relapse, and with a mucous membrane of normal appearance. The long duration of this treatment seems to be the only obstacle to its general use.

Treatment of Chronic Glaucoma by Galvanization of the Cervical Sympathetic—M. F. Allard (Paris)—The principle of the method advised by the author consists in utilizing the sedative action of the positive pole of a continuous galvanic current of strong intensity (15 to 20 ma) to the cervical sympathetic, the whole length of the neck. He reports ten observations of simple chronic glaucoma. These patients were observed by oculists who registered and measured the progress realized during the course of treatment. In two cases the vision was irremediably lost, but the electrization succeeded perfectly in calming, after a few applications, the violent peri-orbital pains that had resisted other medication. In three, vision was greatly improved in less than two months' treatment, and in another, the glaucomatous atrophy, which had progressed very rapidly before electrization, was arrested in its march. Finally, two patients in whom the disease was treated at the beginning, and whose acuteness of vision and the field of vision were sensibly diminished, were cured after fifteen or twenty applications. From these facts it results that positive galvanization, of strong intensity, of the cervical sympathetic, has a sure effect upon simple chronic glaucoma. The sedative action of the positive pole, by diminishing the excitability of the sympathetic, produces an action similar, although very much attenuated, to that of section of the nerve. The effect manifests itself by a marked diminution of the ocular tension, also of the painful phenomena, improvement of vision, varying according to the degree of glaucomatous atrophy, and measured by increase of visual acuteness. Vision may even become normal, if the disease is treated from the beginning.

Cardiac Electric Variations—M. Riviere (Bordeaux), in his work, confirms the results of Starlong and Waller upon the diaphasic variation of the ventricle of the normal heart in cold and warm blooded animals. He demonstrates that the electric oscillating variations obtained by Fredericq, and claimed by him as a proof of the tetanic nature of cardiac contraction, are absolutely anti-physiological, and due to the phenomena of alteration of the organ when near to death.

Interesting Radiographic Cases—M. Foreau De Courmelle—In children, osseous reparation, and the destruction of osteophytes, can be effected without surgical aid. (1) A child of six years was radiographed several times, and numerous osteophytes were seen in the elbow, with fractures of lower extremities of humerus and radius without displacement, which yielded to immobilization. (2) Another case, of a young man who fell from a bicycle upon his right wrist. There was a painful point near the radius that seemed a fracture of that bone. The radiograph revealed epiphysal decollation of the lower part of the ulna, and a large effusion of blood between the two bones. (3) A vesical calculus, hidden behind the left ascending ramus of the pubis, in an old man of sixty years, and very fat, was discovered by the sensitive plate and X rays, and afterwards found by the operator. (4) The stomach was also radiographed, the first proof obtained in the knowledge of the author. The patient had taken 10 grammes of the subnitrate of bismuth, and had dined copiously. After a fruitless effort, the second trial showed the contracted stomach clearly. To obtain the effects for normal or dilated stomachs 20, 30, 40 or even 50 grammes of bismuth are necessary, and the proof is very evanescent upon the stereotype.

Osmose and Bi-Electrolysis—M. Foreau de Courmelles—Organic osmose can easily be proved by various methods, notably the analysis of urine, and demonstrated in different medicaments by the action of electric currents in general, and continuous currents in particular. With the latter, the action is more complex. Without cellular penetration phenomena of double electrolysis are produced, at the expense of the therapeutic agent placed upon the diseased part. This bi-electrolysis, peculiar to the author, is made by means of electrodes, soluble or liquid, of metals that can be attacked by the living liquids, iron, copper, zinc. Medicated solutions contained in tubes or

graduated cups and placed in contact with the tissue to be modified; injections made at the seat of lesions, and then electrolyzed. The principal medical applications of bi-electrolytic osmose with soluble metallic stems, with tubes filled with iodide of potassium or an intra-uterine injection of the last agent, have especially succeeded in uterine affections, metritis, menorrhagia, fibroma, having regard to its polar action. Gout, in which bi-electrolysis is eminently marked, more apparently than simple penetration, or, cataphoresis, yields its tophites to the carbonate of lithine, the pain often disappears from the alkaloids and continuous currents as penetrating agents. Tuberculosis may be benefited by the employment of electric cups half filled with iodureted creosote; hypochlorhydria, by intra-gastric positive electrization with a weak solution of chlorhydrate of ammonia; prostatic hypertrophy can be removed by same agent.

Treatment of Tuberculosis by Landerer's Method—M. S. Bernheim—This method consists in injecting into the veins or muscular tissue the cinnamate of soda. The numerous experiments and clinical observations of MM. Landerer and Bernheim yield the following conclusions: (1) Cinnamic acid and its compounds may be considered as absolutely harmless products, exercising no action upon the organism of the healthy man. Tuberculosis alone is sensitive to its action; no other diseases are affected by it. (2) The action is shown by the following effects: From the first injections a hyperleucocytosis is established, and large numbers of polyneuclear leucocytes and eosinophiles are found in the circulation. Around the tubercular deposits an inflammatory process is produced, which terminates by the production of conjunctive tissue and yellow vessels. This sclerous transformation extends by radiation through the tubercles, which soon present the appearance of cicatricial tissue. (3) The injections of cinnamate of soda, which may be gluteal or intravenous, should always begin with very small doses, 0.001 milligramme, and up to 50 milligrammes, beyond which it is useless to go. In increasing the dose, be guided by the patient's general condition, by fever, hemoptysis, and by the leucocytosis, and continue the method as the case is more or less grave, and may be necessary for a year. The patient should be placed in the best hygienic conditions. (4) MM. Landerer and Bernheim have collected 284 cases of different forms of tuberculosis, and it results from their experimental orservations, microscopic and clinical, that in cinnamic acid and its derivatives they possess agents capable of exercising an energetic influence against tuberculosis. They cite a large number of improvements and cures obtained exclusively by this method. (5) According to M. Landerer, cinnamic acid may be considered as an antidote to the bacillus (theory of Buchner). By combining it with tubercular toxines a harmless substance is produced. On the contrary, according to Bernheim, the product will act as a phagocytic agent. The great number of leucocytes put the organism in a condition of strong defense, and Koch's bacilli can secrete little or no toxines. (6) The curative action of cinnamate of soda may be controlled by surgical methods, and instead of a hyperleucocytosis, may assist in the production of young and healthy growths and a sclerous cicatrization.

The Fever of Tuberculosis—M. S. Bernheim—From experimental and clinical researches three varieties of hyperthermia are produced in the different manifestations of tuberculosis. (1) Pure bacillar fever. (2) Septic fever. (3) Hectic fever. The pure bacillar form may be created experimentally, as seen too in miliary tuberculosis, meningitis, certain varieties of pleurisy, pericarditis, and tubercular peritonitis. The septic fever, due to the toxines of other bacteria than the bacillus of Koch, is observed in sub-acute phthisis, in tubercular pneumonia, during the second period of common phthisis, and in a large number of surgical forms of tuberculosis, with various lesions. Hectic fever is due to the association of the bacteria of suppuration with Koch's bacilli, the toxines of which are reabsorbed and produce general poisoning of the whole organism, by which it is impregnated. This poison rapidly produces cachexia and ends fatally in death. As respects treatment, M. Bernheim recommends absolute repose, good hygienic and dietetic observances in all the tubercular manifestations. He combats the pure bacillar fever with gluteal injections of the cinnamate of soda. For the septic fever he uses salicylic acid and antipyrine and finally all remedies of a hygienic character suitable for hectic fever.

ACADEMY OF MEDICINE.

Value of Gaïacol Plasters for the Differential Diagnosis of Intermittent Fever, and Acute or Sub-acute Tuberculosis of the Young—M. Moncorvo (Rio de Janeiro)—The difficulty, often very great, of diagnosing tuberculosis in a child, is increased in paludal countries, especially when malaria and tuberculosis co-exist. Of 219 tuberculous children, I have proved that 113 were affected with malaria. In the pernicious forms of paludism the issue of the disease often depends upon the rapidity of the treatment, and consequently, of the diagnosis. Examination of the blood is not easy in practice, and does not always give the solution. So, when there's a doubt between a remittent fever of paludal origin and tuberculosis, as yet in a latent condition, I resort to gaïacol, in the form of plasters upon the skin. Its anti-pyretic action succeeds, almost without exception, in tuberculosis, and fails in febrile malaria. From numerous observations I conclude: (1) The anti-thermic action of gaïacol (synthetic), used in the form of cutaneous bandages, very active and prompt in the fever of tuberculosis, remains inert, without exception, in cases of paludal fever. (2) This diversity of action of gaïacol gives to it an indisputable value in determining a differential diagnosis between tuberculosis and acute malaria. (3) The gaïacol so employed suggests the diagnosis, even when the two diseases are united. J. A. C.

CORRESPONDENCE.

ON THE USE OF TOBACOO.

Dr. Woods contributes a paper entitled "Some of the Minor Immortalities of the Tobacco Habit," to the *Journal of the American Medical Association* of April 1. The paper was called forth as an indignant protest against the proposed "smoker" to be given by the Alumni of the Medical Department of the University of Pennsylvania. Its fierce arraignment of smokers would seem at first an attempt to make a bogus attack on tobacco smokers in general, and it reminds one of the mock trials of leading citizens for stealing Plymouth Rock roosters, but as one reads on the seriousness of the attack and the denunciation of smoking as a *vice* is certainly fierce enough to please the most rabid anti-tobacconist. The users of the weed are informed that the *vice* is responsible for more sins of all kinds than the use of liquor, and the smoking fraternity or supposed to be convicted. It is claimed that *smoking* is "an indulgence condemned by almost *every* prudent father, by almost every mother and wife, by *all* who have been its victims, by nearly all who have not been, and by many who are still under its thrall!" It is declared to be "a custom opposed to health, and that has become the bane of domestic and public ethics as well as æsthetics, a menace to higher education, a concomitant of nearly every modern error, *an enemy of moral reform*, a cause of mental decay, a habit, as many homes can testify, often causing the obliteration of that faculty that enables man to recognize the rights of others—and finally the *curse* of modern civilization!"

After going on for hundreds of words denouncing fiercely the monster vice, Dr. Woods pays his attention to "the vulgarity and licentiousness of the press"—so we wicked tobacco smokers are certainly in distingished company!

The tobacco smokers, after further condemnation, are dismissed, supposedly in a state of annihilation, as "lovers of pleasure more than lovers of good." It may be well to quiet our nerves with a fragrant Havana, or a briar root filled with the delicious mixture known to smokers, and cogitate for a few moments over the furious attack of this apostle of virtue. In spite of the charity which our pleasant smoke generally cultivates, we are favorably reminded of Mr. Lincoln's remark to the office seeker, who, upon being offered a cigar, refused it with the remark: "Thank you, Mr. President, I have none of the *small* vices." "Humph," responded the President, "and probably none of the great virtues." The picture of the "Smokers' Protest" also comes to mind, and the editorial table of the *Journal of the American Medical Association* will be flooded with protests probably for many weeks to come. Not long ago some Presbyterian ministers in Philadelphia solemnly decided that smoking is a sin, but those who love the wicked weed took comfort from the encouraging words of many clergymen of

national distinction, who not only do not think smoking a *sin*, but who freely indulge in the pleasant pastime themselves. Is it not waste of time to argue against smoking? Nothing can stop the world from using luxurious tobacco. "Excess is the cemetery of all pleasure," but rational indulgence in tobacco is believed by many famous surgeons and physicians to be not only agreeable, but positively beneficial—helpful to mind and body. Army surgeons of experience know well what value the pipe has for the soldiers' well-being and our brave jack tars find in smoking solace and cheer. In our own experience we have not found those opposed to tobacco men of exceptionally level heads. Only now and then have we met men of *sturdy* mental and bodily vigor opposed to the habit. We have met some men who, while protesting vehemently and intemperately against the use of tobacco, nauseated us with their foul smelling breath, indeed so much so that we could have wished that *they* would take up the use of the excellent disinfecting pipe for the benefit of their suffering friends.

There are strong arguments in favor of smoking when we recall the splendid physique of our manly North American Indians, the most superb specimens of aborigines. We refer only to those we have seen among the *thoroughbred* tribes. These Indians have been smokers for countless ages, and the teeth which they have been blessed with by nature were splendid specimens in comparison to the teeth in the mouths of the anti-tobacconists. Excellent medical men believe that tobacco smoking is a decidedly reliable protection for physicians on many occasions of professional experience, and it is certainly antagonistic to the development of tuberculosis.

It is quite impossible in this short space to argue for the successful continuance of smoking, but really no argument is necessary, and no amount of hysterical anathemas can interfere with the sale of pipes, tobaccos and cigars, and the "Don Quixotes" know this well enough. The smoke, like the windmills of old, will go on and on in spite of the shrieks and perturbations of the prejudiced. It is, however, very true that many do not know *how* to smoke, *when* to smoke and *what* to smoke. There is such a thing as the hygiene of smoking. Clean briar wood pipes—the pipe should be frequently cleaned—pure unadulterated tobacco—the most wholesome is the granulated or virgin leaf plug—heavy plug tobacco is for the average man injurious, and if one must spit even occasionally while smoking the tobacco and pipe should be inquired into and changed, and if the expectorating continues the use of tobacco, for *that* man should cease. W. T. P.

TREATMENT OF CANCER BY CATAPHORESIS AND BY ORGANOTHERAPY.

Dr. G. Betton Massey, in a paper presented at the recent meeting of the American Medical Association, reports that since the method of growth-destruction by electric diffusion of germicides was first described by him before the same body in 1897, it has been employed in twenty-six cases of carcinoma and sarcoma, "many of them extremely bad cases, mere forlorn hopes." Sixteen of these were inoperable, of which two cases were cured, and one probably cured. Among the ten operable cases but one failure occurred, due to neglect on the part of the patient to submit to a second application. All the other operable cases—nine in all since the former report—are well to-day and bid fair to remain well. The author concludes as follows:

1. The massive diffusion of nascent mercuric salts within a growth or cavity of the body by an electric current constitutes a novel therapeutic procedure of great value in the destruction of foci of malignant or non-malignant germ growths, when said growths are so situated as to permit of penetration and drainage.

2. This cataphoric destruction of the germs of a primary cancerous growth *in situ* including outlying colonies and so-called roots of prolongation, permits the preservation of the unaffected portions of the organ in which it is situated, and offers greater security against a recurrence of the growth than efforts to remove the living malignant growths by cutting operations.

3. While the cataphoric method may be employed as a palliative in non-operable malignant growths, and may at times cure them, its chief value is in the total destruction of the malignant germs in the early stages of primary growths, and in the same stages of purely local recurrences.

From a study of organotherapy in inoperable carcinoma, Dorland (*Therapeutic Gaz.*, May 15, 1899) draws the following deductions:

1. The ovaries exert a curious and as yet incomprehensible influence over the tissues of the body, and especially over the mammary glands.

2. This ovarian influence is in part neutralized by the action of the thyroid gland, or of thyroid substance introduced into the body.

3. The administration of thyroid extract alone to patients suffering from cancer of the mammary gland or of the cervix uteri, which has passed beyond the possibility of extirpation by the knife, exerts a slight inhibitory action upon the growth, and results in a decided relief of the two prominent symptoms—pain and discharge. This action, however, appears to be but temporary.

4. The removal of the ovaries in cases of inoperable carcinomata, provided these organs be actively functionating, will result in many cases in an arrest of the progress of the malignant disease, or even in a total destruction of the neoplasm, and an apparent cure of the condition.

5. This inhibitory action of oöphorectomy in inoperable carcinomata is more decided if at the same time as much of the cancerous growth be excised as is possible, and the operations be supplemented by the administration of thyroid extract in full doses.

6. In older women, in whom there has already occurred an atrophy of the ovarian stroma, excision of these organs does not result as promptly nor as favorably as in women who are passing through the period of sexual activity.

7. The relief afforded by the employment of Beatson's method appears in from twenty-four to forty-eight hours, and in favorable cases is rapidly progressive.

8. The dose of the thyroid extract that may be safely employed varies from 10 to 15 grains daily.

9. It would seem that even though this method should not result in an absolute cure of the malignant disease, it would afford a longer lease of life and more effectual relief from suffering than would any other palliative operative precedure as yet devised. F.

IS LEPROSY CURABLE?

This important question is discussed by an American physician, Dr. Roger S. Chew, of Calcutta, in a paper contributed to the *Medical Age* for August 25, 1899. His answer is very decidedly in the affirmative, and the figures given appear to bear out the contention. The author is evidently a rather eccentric genius—many, no doubt, would call him a crank—but the appointments he holds show him to be a chemical and sanitary expert of some prominence. If any such results as he claims have been previously obtained from the treatment of leprosy, we have yet to hear of them.

The remedy which has worked these alleged wonders is described by Dr. Chew as "a crystalline compound isolated from a maceration of the roots, leaves,, and seeds of a three-year growth of *gynocardia lancifoliata.*" Its chemical composition, briefly written, is $[(Cg\ H_{31}\ Oy) + K\ C\ N\ O] + Clu$, whence he has given it the name "Gynocyanauridzarin," or C. O. N. The crystals are dissolved, under extremely heavy pressure, in cinnamic alcohol (their only known solvent), and the solution is passed immediately into olive oil, whereby they preserve their medicinal virtues for a long period.

"Given internally to dogs and cats in doses of 0.01, 0.005, 0.002, and 0.0025 grain, these crystals produced cramps, diarrhœa, and vomiting, with paralysis of the musculo-cutaneous nerves and great physical prostration, while doses of 0.1 to 0.5 grain caused violent convulsions, resulting in death in less than twenty-four hours, and autopsy revealed some of the post-mortem appearances of potassic-cyanide poisoning.

"Doses from 0.00001 to 0.0001 grain, on the other hand, appeared to act as a powerful musculo-cutaneous neural stimulant, causing in the healthy subject anæsthetic areas, ulcers, and crops of papillae, but in the ailing subject inducing rapid granulations of indolent ulcers, converting pus and sanious exudations into serous discharges, which rapidly lessened and disappeared, retarding the development and movement of tubercle bacilli, increasing the number of red blood-corpuscles, and apparently stimulating the leucocytes to increased energy.

"So far I had succeeded far beyond my greatest expectations with the brute creation, but how would the drug

work on man? My first human case was that of an East Indian clerk, who told a most harrowing tale of how after eighteen years of hard and honest service he was suddenly dismissed from employ to maintain his wife and eleven children as best he could, because fifteen years previously he had showed slight symptoms of leprosy that remained stationary till very recently, when the disease, taking a forward bound, grew worse and worse, and some medical men had told his chief that he was incurable and that it was dangerous to his mates for him to remain in office. He had heard that I was experimenting on dogs, etc., and as he cared precious little how soon death finished his sufferings he begged me to try what I could do with or for him. The temptation to prove a pet theory was great indeed, but the danger to me was greater, for should the man die under the experiment I was in a country where I might be indicted for poisoning him. Anyhow I risked the chances, and putting him on C. O. N. watched him anxiously. A week later his eyes seemed brighter and he did not crave for death, while there was a distinct change for the better in his ulcers. The progress of his cure seemed slow at first, but at the end of the fourth month there was neither sign nor symptom of anything that could diagnose him as a leper. This was nearly twelve years ago. I see the man frequently, and he has not had a single day's illness since he was discharged from the C. O. N. system of treatment. After his cure he brought me three cases, whom I treated similarly with like results, and these cases brought others. Believing that I had at last solved the problem of lepra, I sent small packets of C. O. N. to my relatives and medical friends in various parts of the world, asking them to test the virtues of the drug and take careful notes of the results obtained. They did so, and I am happy indeed to be able to report that every one of the 256 cases treated with C. O. N. recovered from lepra.

"Later on Mr. James Wilson, editor of the *Indian Daily News*, a straight man with broad views, but a perfect stickler for proofs, like Thomas Didymus, appointed a test committee of twenty-nine members (viz., eight army surgeons, six European and Eurasian non-official doctors, five editors of the leading papers, and five respectable gentlemen of tried probity) to inquire into the cure of leprosy, and asked me whether I would undertake to treat twelve lepers under the eyes of this committee. I consented, and the final findings of this committee are published in the *Indian Daily News* of June 11, 1899. I am proud to be able to say that there were no failures among these twelve lepers, the last of whom, a leper of twelve years' duration and a rather bad case, was discharged on March 15, 1891, as cured, and promised to report himself for inspection every two months for a year and a half. He kept his word, and is now vigorously plying his trade of tobacconist without the slightest tendency to recurrence of his lepra or anæsthesia.

"Having made no secret of the C. O. N. system," concludes Dr. Chew, "I naturally fail to see why the official members of the medical profession assiduously refuse to consider its merits and persistently stigmatize it as a patent medicine or secret nostrum, especially when I have offered to take fifty or sixty of their medical subordinates in hand and teach them the manipulation required in the preparation of C. O. N., and to fully instruct them in the methods of applying and using the drug to a successful issue, provided that I am given fair play and am not hampered by red tape."

Elsewhere Dr. Chew remarks that the British papers and most of the Indian journals ignored his communications, "probably because a descendant of Brother Jonathan or Uncle Sam has no right to discover anything in British territory." There are, we believe, several thousand lepers in the United States and its territories today, and their number threatens to increase. If the discovery has any value, this, on the whole, is probably the best field for testing it. F.

DR GIBBES' CORRECTION.

DETROIT, Sept. 24, 1899.

To the Editors of THE MEDICAL TIMES:

Dear Sirs: I have just seen a statement in the current number of your journal which has surprised me not a little. It is taken from the *Home Magazine*, whatever that may be, and says that I consider the whole germ theory of disease to be a fad. This statement is absolutely untrue, as also is the one saying I was Professor of Bacteriology at Ann Arbor. I was Professor of Pathology.

Yours faithfully,

HONEOYE GIBBES, M.D.,
Health Officer.

Office of the Board of Health, Detroit, Mich.

[ED. NOTE.—We gladly make the correction sent us by Dr. Gibbes, but we regret that the letter does not express his actual views on the subject.

If true, we felt that the statement was important, and it was so positively stated that we had no doubt of it.—EDS.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine of New York, Etc.

The Treatment of Soft Chancres by Means of Steam.—E. K. Manfawovsky *(Vratch: Jrnl. of Cutan. & Gen. Urin. Dis.,* July, 1899) says that in eighty-nine cases of chancre the diagnosis was made clinically, not by demonstration of the Ducrey bacillus. Among them, twenty were accompanied with buboes and one with necrosis. The localization was on different parts of the penis. The author placed the end of Professor Shegirer's steam apparatus at a distance of four to eight centimeters and subjected the sore to the action of the escaping steam at 50° to 60° C. for three to ten minutes. The surrounding healthy tissues were protected by means of gauze. After from one to two minutes the floor and the edges of the sore under the influence of the steam became pale, then rose-like in color. Later, after three to four sittings, the sore begins to bleed, and takes on a healthy appearance. A complete cure was obtained by the author after ten to fifteen sittings.

Treatment of Prickly Heat.—Dr. Frederick Pierce, of Bombay, in the *Journal of Tropical Medicine* for June, 1899, says that those suffering from this annoying affection should have the body anointed with oil for the purpose of protecting it against irritation of the exuded sweat. It also keeps the skin soft. The preparation considered by Dr. Pierce to be the most efficient is a mixture of almond oil and lanolin in the proportion of 8 to 1. The body should be anointed with this night and morning, and gentle massage of the skin used at the same time to relieve the distressing symptoms. The skin is sometimes so excessively tender that anything like rubbing must be avoided. Temporary relief can be obtained by applications of carbolic acid, menthol, and other drugs, but lasting improvement is secured by the use of oil.

Treatment of Carbolic Acid Poisoning.—Harnsberger *(Charlotte Med. Jour.)* saw a boy, aged sixteen years, within thirty minutes of the time that he had swallowed 1.5 ounces of carbolic acid. He was in a limp and comatose state, the pulse imperceptible. A pint of cream was at once poured into the stomach, which was kneaded in order to mix thoroughly the cream and the carbolic acid. Dry heat and friction were applied to the legs and arms. In two or three hours consciousness returned. The administration of cream and unskimmed milk was continued at short intervals for several hours. Harnsberger has found that an adult can take 4 drachms of pure carbolic acid mixed with cream and glycerine, or with alcohol, without any toxic symptoms developing.

To Heal Vaccination Sores.—Bond *(Maryland Med. Jour.,* July 1, 1899) says that although the most careful vaccination with fluid lymph will sometimes be followed by an ugly sore, the impression that one must wait with patience, as the sore will not heal for several weeks, is entirely unfounded. In all such cases the application after the removal of the suppurating crust, of a solution of nitrate of silver of 80 grains to the ounce will cause the sore to dry up, so that it may heal after one dressing. If the protective cotton again soaks through with pus in the course of a week, the treatment is repeated over the much smaller area, and this application will complete the

healing. A solid silver stick will answer as well, but it causes much pain, so that children dread a second application, while the 80-grain solution is almost without pain. By pursuing this line of treatment the annoyance of an arm which shall be sore for months, perhaps, is done away with, and one of the strongest objections to vaccination is thereby overcome.

Hemorrhage as a Sign of Congenital Syphilis.—In the course of the description of a case of hemorrhagic congenital syphilis appearing as a hemorrhagic vesicular eruption, Dr. William S. Gottheil calls attention to the importance of otherwise unexplainable bleedings in infants as symptoms of congenital lues. They may be the only mark of the disease, especially at first; but they are almost invariably accompanied by a diminution of the coagulability of the blood, similar to that of hemophilia, and the case usually goes on rapidly to a fatal termination. Disease of the vascular walls is one of the commonest and best known effects of the syphilitic poison, leading to hemorrhagic discharges from the mouth, the bowels, the bladder, or the nose; to blood accumulations under the skin and mucosæ, or in the serous cavities and internal organs; or, finally, making the syphilitic eruption itself hemorrhagic. The author emphasizes the importance of remembering these facts in the treatment of infants who have hemorrhagic discharges or a hemorrhagic eruption, the cause of which is obscure.

Mental Element in Therapeutics.—Dr. Philip Zenner, in a paper presented at the recent meeting of the American Medical Association, pointed out that the great influence of the mind in the cure of disease is becoming more and more recognized in the medical profession. That knowledge is the key to understanding how sacred shrines and relics, new "systems," and vaunted remedies have effected and still effect, apparently marvelous cures, and succeed in imposing to such a degree on a credulous public. We are learning in the same manner, and this is of greater consequence to us, that many of the drugs and other therapeutic agencies applied to the treatment of disease, often act chiefly through mental impressions. This influence of the mind is not limited to any one class of diseases. It is often observed, sometimes even marked, in organic disease, especially in the amelioration of some of its manifestations. Yet its greatest display of power is naturally to be expected in functional, and above all in nervous diseases. He reports two cases of brain tumor in detail.

Serum Treatment with Serum from Human Convalescents.—According to Weisbecker *(Muench. Med. Woch.*, Aug. 8, 1899), measles, scarlet fever, typhus, pneumonia and diphtheria have been aborted or remarkably attenuated by serum derived from persons convalescing from the same disease. A single injection of 10 to 15 c. c. for an adult, or 6 to 8 c. c. for a child, is usually sufficient, repeating the injection if a relapse occurs. It is used the same as Behring's serum, restricting it to severe cases, and is most effective the earlier it is applied, the third day the limit in pneumonia, for instance. It is powerless against septic complications and after-affections, except in so far as its early use prevents their appearance. The serum is obtained from blood taken from a vein at the elbow, caught in a small glass jar with a metal screw cover, with a capacity of 150 to 250 c. c., three-quarters filled. It is set aside in a cool place from twenty-four to forty-eight hours, when the serum is usually separated and can be aspirated with a syringe and transfered to smaller vials containing the amount for one injection. He adds a few drops of a 0.5 per cent. carbolic acid solution to each dose. The chief point to be borne in mind is that no serum can be utilized except that from otherwise sound, normal persons, with a typical, classic case of the disease, which has not been treated with serum or medicine of any kind, and has passed into the unmistakable convalescent stage, the fever permanently banished, and not later than three or four days after the decisive fall of the temperature in measles, scarlet fever, pneumonia and diphtheria, and four or five days in typhus. The limit for whooping-cough, influenza and tetanus has not yet been definitely determined. The amount of blood that can be withdrawn varies from 100 to 500 c. c., depending on the case, and no inconveniences have been observed from this venesection; 200 to 220 c. c. will provide serum for twenty to twenty-two other cases. Asepsis in every particular is of vital importance. All medication, baths, alcoholics, must be avoided; the diet, milk, bouillon, eggs, with plenty of water. He gives, as placebo, a solution of hydrochloric acid.

Soda-Water for Bulimia.—Carbonic acid gas has the singular property of lessening the sense of hunger, and may profitably be remembered in dealing with cases of diabetes in which bulimia is a prominent symptom. The seat of hunger is found in the solar plexus. By the use of water charged with CO the branches of the solar plexus distributed through the mucous membrane of the stomach are influenced in such a way that the abnormal irritation of the plexus, which is the foundation for the ravenous hunger often present in diabetes and certain forms of indigestion, may be greatly mitigated, if not wholly appeased.

Water charged with carbonic acid gas may likewise be employed with advantage in many cases of hyperpepsia in which there is a sensation present in the stomach described by the patient as a gnawing sensation, "goneness," "emptiness," etc.

Movement Cure of Essential Leucorrhœa.—The rebelliousness of leucorrhœa essentialis to treatment is well known. It appears to be a fact that in low, moist and marshy countries leucorrhœa is more common and more abundant than in countries exhibiting the opposite telluric conditions. It is also admitted that the lymphatic, anæmic or scrofulous girl or woman is especially predisposed to leucorrhœa. According to D'Epine one woman in three suffers from leucorrhœa. According to Schapiro there is naturally a general laxity of the pelvic tissues which is distinctly favorable to leucorrhœal discharges, while the vascularization of the intra-pelvic tissues is also especially adapted to the same ends.

There is abundant evidence that antiseptics, astringents and caustics are powerless to remove this idiopathic condition. Schapiro *(Rev. Prat. D'Obstet. et de Gynecol.*, June, 1899; *Med. Rev. of Revs.)* has, therefore, made use of the movement cure, which is simple and direct, consisting of respiratory gymnastics, with gynæcological massage and movements directed to the removal of circulatory inequalities and congestions. The technique of these proceedings is given in full:

The first manipulation consists essentially of flexion and extension of the arms. The operator sits facing the patient and takes her by the wrists. As he raises her arms he commands her to take a deep inspiration. The patient then assumes the active role and draws her elbows backwards. These movements are then reversed as the patient empties her chest by expiration.

The second manipulation requires that the patient, being in the recumbent position, flex the thighs upon the pelvis and the legs upon the thighs. As these movements have relaxed the abdominal walls, the operator, seated on a stool at the patient's left, introduces his left index into the vagina, under the patient's thigh, and with his disengaged hand executes stroking movements upon the abdominal wall. These frictions are executed in a circle, and are at first superficial and then deeper. They are always gentle, and the skin is never rubbed, but the viscera are rolled beneath the fingers. The left index meanwhile steadies the uterus. These movements are kept up from three to five minutes.

The third manipulation consists of applying the palms to the external aspect of the knees. The patient has her knees flexed, feet in contact, pelvis strongly elevated, and she separates her knees while the operator makes counter pressure. Then the knees being widely separated, the operator seeks to approximate them while the patient offers resistance.

The final series of movements is performed with the operator at the patient's back. He seizes her arms below and gently raises them until they meet in the middle line while the patient inspires deeply. This movement is then reversed.

Schapiro has treated twenty-four patients in this manner at the Clinique Baudelocque. As patients never seek treatment for leucorrhœa *per se*, it must be acknowledged that most of the women were also suffering from displacements or menorrhagia. The movements were kept up from twenty days to seven months. Twelve cases were completely cured, ten were improved, and two were not benefited.

In conclusion, it is evident that leucorrhœa may exist

independently of inflammation or infection, and that this form may be made to disappear by correcting irregularities of the circulation. The leucorrhœa which accompanies displacements and menorrhagia may also exist without any local or general anomaly.

Gallnut for Hemorrhoids.—The following statement is from a paper by Roger S. Chew, of Calcutta, in the *Medical Age* for August 25, 1899: Medical literature teems with modes and results of the surgical eradication of piles. I have done my full share of operations, but never perform one now and never need to, as there is a very simple remedy—so simple, indeed, that the profession refused to accept it because it was unscientific. I also laughed at it at one time, but results brought the laugh against me. My tutor was an unlettered, untitled fakir, who dropped into my surgery one morning as I was asking a man with a huge bunch of extremely painful and bleeding hemorrhoids whether he would submit to operation. "Sir," said the fakir, "pardon my interference. Will cutting away swelled veins alter the current of the blood permanently? That man is afraid of the knife. Let me whisper in your ear. Take a *chota harra* (the lesser gallnut); broil it as you would a coffee berry; then powder it, and mixing the powder with a little fresh butter, let the man apply it to the piles after each stool. If it fails to cure him, may Allah send me to perdition." Don't muddle this with the "unguentum gallæ" of the pharmacopeia. Reader, skeptic of results I tried it. Eight applications cured the man, and to my surprise the first application stopped the bleeding entirely. Since then I have cured some hundreds of cases with the same thing.

Pocket Disinfectant.—The "Sanitas" Company has prepared a unique pocket disinfectant as a preventive against infectious diseases, in the form of a *cachet* which may be broken in the handkerchief and inhaled in the same manner as is done with amyl nitrate in angina pectoris. It is non-corrosive, not poisonous nor offensive in smell, and is a prompt and energetic germicide.

"Sanitas" fluid I have found, diluted with ten to thirty parts of water, the best local remedy in balanitis, in eczema, and to heal ulcerations, even chancroids.

Rectal Medication in Infancy.—Garriga *(Rev. de Therap. Medico-Chirurg.,* June 1, 1899) advocates rectal medication in young infants, on account of the rapid absorption by the rectal mucous membrane, and because of the difficulty of administering to an infant anything having an unpleasant taste. The best method is to introduce the desired remedy in a cocoa-butter suppository. In this manner the author has obtained excellent results, for instance, with the sulphate or hydrochlorate of quinine in eruptive fevers, grip, etc. The suppository will be melted in five minutes, and after that there is no danger of its expulsion.

RETROSPECTIVE DIETETICS.

Condensation and Preservation of Milk by Refrigeration.—In an article contributed to the American Medical Association last year *(Journal,* Dec. 11, 1898), Dr. Henry O. Marcy described a process invented by Dr. B. F. McIntyre, of New York, by which 80 per cent. of the water is abstracted from milk by freezing it, when in moderate agitation. The water, as ice, is taken from the milk in comparatively stainless crystals, almost without loss of solid product. It has been shown that the expense of condensation is very much less than by evaporation in vacuo, and that the product is of much greater value. By a series of experiments conducted under scientific supervision it was found, although the resultant was not perfectly sterile, that the bacteria were in large measure destroyed, and that the concentrate put up in glass jars, such as are commonly used in the distribution of milk, has a keeping quality of weeks rather than days. Encouraged by these results, Mr. Edward Burnett, of Boston, has established a plant (Cold Process Co., of Contocook, N. H.) of sufficient capacity to demonstrate the commercial advantages of the process. It is believed that the process offers a practical solution of the difficult and expensive problem of milk distribution in cities; that the family supply will be furnished in a concentrate one-fifth the bulk of ordinary milk, and that distribution of it from house to house made once a week will be ample for practical purposes. By this process the fat globules are uninjured, and as a result the cream is unimpaired for table use. Pathologic bacteria are destroyed, and the milk-supply will be rendered safe for use.

The economic advantages are obvious. In the first place the milk will be furnished the consumer at a material reduction in cost, and the waste in its daily use will be very greatly lessened. A far more satisfactory product in every respect will be furnished, and with a little care the pantry will be in constant supply. Mr. McIntyre is by no means satisfied with furnishing a product which contains even so little as 7 per cent. of water, and he looks forward to the practical demonstration of furnishing milk in a solid form, with keeping qualities equal to those of butter or cheese. Dr. Marcy has in his possession a sample of solid milk prepared by him, by this process, now some months old. The hope is indulged that the work thus begun will prove so satisfactory that it will revolutionize the distribution of the milk supply of the world.

Diet in Chronic Diseases.—The extreme restrictions in diet that were formerly inflicted upon patients with chronic diseases are gradually giving way to more rational measures, says the *Charlotte Medical Journal.*

In diabetes the patient is no longer confined to an absolute meat diet, as experience has taught that such a diet of itself is injurious to the organism. In chronic gastro-intestinal troubles the same rule holds good. When it is remembered that the majority of chronic diseases are the result in great part of excesses in eating and drinking, especially of particular kinds of food, a great improvement may often be effected in such diseases if the particular kind of food that has caused the condition be prohibited for a time.

Diabetics will often be found to have consumed large quantities of sugar-forming food stuffs. Those with gastro-intestinal diseases will have indulged to excess in starches, sour and highly seasoned foods and pastry. Many such cases admit the excessive use of tea or coffee. The very prevalent habit of pouring down several glasses of ice water with a meal, and two or three glasses of iced tea should not be lost sight of. The excessive use of alcohol and tobacco are also important factors. But above all the habit of eating hastily, without proper mastication of the food, should be remembered as a very important factor in the causation of chronic diseases.

The correction of such abnormal practices, which are bound to bring sickness to the healthiest individual, should be the first step in the treatment; then a plain, healthy diet with plenty of exercise in the open air will give results with the proper medication that cannot be obtained otherwise.

Diet in Typhoid Fever.—According to Abbott *(N. W. Lancet,* August), the present accepted ideas as to diet in typhoid need some change. A milk diet is open to certain objections, and does not agree with every individual even when sick. It has been his practice for years to give his typhoid patients what might be called a soft diet, consisting of milk when it is agreeable, buttermilk, all kinds of soups and broths, raw and soft eggs, and the yolks of hard-boiled eggs. As regards the use of fruits, in his section constipation is rather more common than diarrhœa, and he does not prohibit stewed or baked apples, the pulp of grapes, the juice of oranges, and even bananas, if properly ripened and sound. In regard to the intervals of feeding, he believes in longer intervals of two, three or four hours, or even more. Alcohol in fever he thinks is not only unnecessary, but often injurious, and he does not encourage its use.

Food Diseases.—Dr. William Ewart *(Brit. Med. Journal,* Dec. 10, 1898) states that there is a source of nervous ailments entirely special to this age, and the unexpected outcome of our nineteenth century chemistry and advertising. While the increasing purity of natural foods has reduced our mortality, modern ingenuity has been the unintended means of occasionally supplying poison in food. Fortunately, ptomain poisoning is an unusual accident. A much more serious and widespread evil has been the undiscriminating substitution by mothers of condensed milk and manufactured foods for the fresh supply of milk. This neglect of fresh milk and the untutored administration of artificial foods, even of the best kinds, without due regard to proportion and to suitability, have been disastrous.

MISCELLANY.

—Professor Charles Stoerck, the eminent laryngologist, died in Vienna on September 14.

—Sir Michael Foster will deliver in San Francisco "the Lane Medical Lectures" for 1900.

—An international congress of deaf-mutes is to be held in Paris during the Exposition.

—Lord Salisbury, the English Premier, is a chemist, and from his laboratory it is said an important chemical discovery is shortly to be announced.

—By a recent government order, all children in Japan must be vaccinated before the tenth month, and re-vaccinated at six, and again at twelve years of age.

—The *Gazzetta Degli Ospedali e Delle Cliniche*, of May 16, 1899, announces the appointment of Miss Rina Monti to the chair of comparative anatomy in the University of Pavia.

—The whole estate left by the late Lawson Tait has been valued at $47,850, and his personal estate at *nil;* all bequeathed absolutely to his wife. He was supposed to be worth much more.

—An Italian wife murderer, after spending three months in the Hudson County jail, Jersey City, during which time he had not washed his face or hands, killed himself to avoid taking a compulsory bath.

—In Vienna, recently, a robust young woman died with symptoms of poisoning ascribed to a green silk waist. The perspiration made the color come out under the arms, where there happened to be some pimples.

—Mrs. Sally Batchelder, of Peabody, Mass., celebrated her one hundred and fifth birthday on August 8. She is reported to have recovered from a fracture of the leg, which she sustained in her one hundredth year.

—The widow of a respected citizen of Riga, who died recently, has applied to the court for permission to resume her maiden name, on the ground that the husband with whom she had lived for twenty years was a woman.

—An International Congress for the Amelioration of the Condition of the Blind is to be held in Paris, August 1 to 5, 1900. For particulars address the secretary-general, Maurice de Sizeranae, Avenue de Breteuil, 31, Paris.

—Mlle. Edwardes Pilliet, M. D., is the first woman teacher of medicine in Paris. She is to lecture on physiology to the nurses ot the Hôpital Lariboisière, and to give instruction in bandaging to the attendants at La Salpetrière.

—The suggestion is offered, in a Paris exchange, that physicians in cities and small towns might obtain change of air and scene with the minimum of loss and expense, by merely exchanging their practices, offices, etc., for a short while.

—An interesting feature of the Cuban village at the Greater America Exposition is a collection of over 1,700 varieties of snakes, probably the finest and most interesting collection ever made, all alive and apparently in active enjoyment of their surroundings.

—Hoveloch, a celebrated French author, in his "Science of Language," gives us the origin of the word "cadaver," so common to all medical students, in the following manner: It is derived from three words, *ca-io, da-ta, ver-mibus,* meaning "a body given to worms."

—Liquid petroleum is recommended as a mechanical laxative, in quantities of from two to three ounces. Upson considers it absolutely non-irritating, that it does not distend the bowel, nor cause flatulence; indeed, diminishes it, and is easily taken, even by children.

—A mixture of borate of soda and milk is recommended by a Parisian chemist as the best general antidote. It should be given the first thing after emptying the stomach. For vegetable poisons, the best antidote is a 1 per cent. solution of permanganate of potash.

—According to the *Journal de Médecine de Paris* for July 2, Dr. Spaak, of Brussels, has obtained excellent hemostatic results from a mixture of two parts of chloroform with 100 parts of water. This mixture is said to rapidly arrest bleeding after tooth extraction.

—A singular case of death, illustrative of the danger of keeping household pets in living rooms, is reported from Washington, D. C. A parrot of mischief-making propensities removed the lava tip from a gas burner, and as a result caused the asphyxiation of a young woman.

—Andery (*Berl. Klin. Woch.*, No. 15, 1899) has noted in a number of cases preputial herpes preceding the development of a chancre, and regards the outbreak of an eruption of this kind in a young man who has been exposed to the disease, as highly suggestive of syphilitic infection.

—The Italians report (*Semaine Méd.*, July 19) that severe cases of diphtheria can be effectually treated by the administration of diphtheria serum by intravenous injections. Gagoni has recently saved, by this means, three children in a very advanced stage with croup and symptoms of suffocation.

—Joel Parker, aged eighty-four years, a veteran of the Civil War, was buried in Ocean Grove, N. J., June 11. He had been twice married and was the father of twenty-four children, all of whom were present at the funeral. The oldest child is sixty years of age and the youngest six months.

—The latest reported German invention is a "beer tablet." The beverage is dried and compressed, and when water is added to the tablet carbonic acid gas is formed, so that a foaming beaker is produced, as good, it is said, as if freshly drawn from the barrel. It is non-alcoholic, of course.

—Among the spectacles to be seen on the Greater America Exposition Midway is a man of ordinary height who actually weighs 617 pounds. He is a native of Switzerland, forty-nine years old. He is accompanied by his wife, who will hardly weigh more than 100 pounds. He is found in the German village.

—*El Progreso Medico*, of Havana, Cuba, speaks most enthusiastically of the great work accomplished by Dr. C. K. Furbrusch, of the American Army, in reorganizing the hospitals of Havana and founding a training-school for nurses, in the short space of three months before he was transferred to Manila.

—No, Brother Simmons!—Sterne, the author of "Tristram Shandy," was *not* "a practicing physician." He was a beneficed clergyman of the Church of England, who had never even studied medicine. But men of genius often anticipate the revelations of science, as he seems to have done in regard to "typhlitis."

—To escape the strict quarantine measures, the captain of the *Albertville*, arriving at Antwerp from the Congo, had a couple of negroes suffering from smallpox thrown overboard. A passenger reported the occurrence to the authorities, but the captain managed to escape to England. The Belgian Government has requested his arrest.

—Niebuhr states that the first mention of the plague in history has been recently deciphered on a clay brick dating from 1380 B. C. It is a message from the King of Alaschja to the Pharaoh Amenophis, apologizing for the smallness of his tribute a certain year, as all his officials had died "by Nergal's hand." Nergal was the pestilence god.

—The opium habit prevails among Europeans in the East to an extent which is appreciated only by those who are brought into contact with its victims. In view of this fact the announcement by McLeod, of Shanghai, that it is possible to cure the habit by the administration of sodium bromide, is indeed welcome news. He gives the drug in two doses of 2 drachms, in solution, every two hours for the first two days, and 1 drachm on the third day. Two ounces in all will probably suffice in most cases.

—Dr. B. F. Ray says, in the *Western Medical Review*, that the following prescription duplicates perfectly the preparation called "Resinol," manufactured by the Resinol Chemical Co., of Baltimore, and sold to physicians at the seemingly exorbitant price of 50 cents an ounce:

℞ Sulphur sub.
Acetanilid.
Bismuth oxid.
Plumbi acetas, aa.....gr. xxx.
Pix. liq. .....m. xxxvi
White petrolatum ..... 3 vi.
Carmine to color, q. s.

M. Sig. To be applied whenever the product "Resinol" is indicated.

ORIGINAL ARTICLES.

THE MEDICAL TREATMENT OF PUERPERAL INFECTION, WITH ESPECIAL REFERENCE TO SERUM THERAPY.

By Howard W. Longyear, M. D., Detroit, Mich.

Gynaecologist to Harper Hospital, President of Medical Board of Woman's Hospital, Clinical Professor of Gynaecology in Detroit College of Medicine, Etc.

DURING the last year a number of articles on the subject of serum therapy have appeared in the medical journals of this country and Europe, showing a far greater interest in the subject than has been evinced in previous years. The evidence, as shown in them, appears to be more or less contradictory in character, which is apparently due to a variety of causes, such as imperfect diagnosis, mixed infections, late instigation of treatment, worthless serums, too infrequent use of remedy, etc. The testimony is, however, on the whole encouraging, and points toward ultimate success. The rapid advance in the science of bacteriology will doubtless in the near future reach and solve some of the problems that are now causing this new therapeutic field to lack the attractiveness of absolute success.

As any case of puerperal infection may be due to the action of one or more of a number of definite toxic agencies, the treatment must of necessity be of a specific character and used understandingly, applying the suitable remedy where possible to each variety of the disease. This being the case, exact diagnosis, usually by the use of the culture tube and microscope, is a necessity for the thoroughly scientific treatment of this disease. Bacteriologic examination alone can determine with precision the variety of infection in any given case.

As illustrating the value of such examinations and the varieties of infection that are liable to cause puerperal pyrexia, a report of Dr. J. W. Williams, of Johns Hopkins University (*American Journal of Obstetrics*, September, 1898), is of interest. In a total of forty-four cases in which fever was present, there were found streptococci in eight; staphylococci in three; colon bacilli in six; gonococci in two; anærobic bacteria in four; unidentified ærobic bacteria, three; bacteria in cover glass, but cultures sterile, in four; diphtheria bacilli in one; gas bacilli in one; typhoid bacilli in one; cover glass, cultures, and blood sterile in one; cover glass and cultures sterile, with malarial plasmodia in blood, one. Several of the cases were infected with more than one of the varieties.

In referring to the eleven cases in which the examination was negative, the writer says: "How great a gain this is can only be appreciated by those who have experienced the immense relief of finding that the uterus is absolutely sterile in a patient whose temperature has suddenly shot up to 103° or 104° on the third or fourth day of the puerperium, and in whom we suspect the possibility of an infection." Think, also, of these eleven cases being curetted and douched and heroically medicated on the shotgun principle, as too often occurs in the treatment of these cases.

In September, 1896, at the meeting of the American Association of Obstetricians and Gynæcologists, I read a paper on "Puerperal Infection," in which I reported a case of puerperal diphtheritic infection, in which the diagnosis was made by bacteriologic examination, and the case successfully treated with diphtheria antitoxin serum. I also reported six cases of puerperal diphtheria at the meeting of the same association, in August, 1897, in all of which bacteriologic examinations were made, four of them being pure Klebs-Loeffler, and two Klebs-Loeffler and streptococcus.

Since then I have had the opportunity of examining six cases, two of which proved to be pure streptococcus, two streptococcus and staphylococcus, and two pure staphylococcus. I have also seen one case, wherein I was called in consultation after the patient was comatose, which gave a history of having fatally infected the infant with erysipelas and an attendant with the same disease, and yet the patient had been treated with diphtheria antitoxin serum, without any bacteriologic examination having been made. In another case, which I reported among the group of six cases of puerperal diphtheria, before mentioned, the mistake of applying the wrong treatment because of an error in diagnosis, was made. The patient, when I saw her in the evening, had had several very violent rigors and temperature was high. A culture was made, and judging from the violence of the symptoms it was a streptococcic infection, and desiring to give the patient the benefit of treatment before the report on the culture could be made, the streptococcic antitoxin serum was immediately used. On the day following, just as the report came that the culture showed pure Klebs-Loeffler bacilli, the patient was seized with a violent chill and died soon after.

Many more citations of a similar character could be made, but these are sufficient to illustrate the point and show the advantage of exact diagnosis in the treatment of puerperal infection.

Dr. Williams' report shows that not only can puerperal pyrexia be produced by a number of known agencies, but that fever occurs from causes outside of the genital tract, which is not due to either malaria or mastitis. Such cases are very likely due to infection from the alimentary canal, and can be usually cured by thoroughly unloading and disinfecting the bowels.

The reports from various sources all prove, as the cases cited show, that the streptococcus is not so prevalent as a causative factor in puerperal infection as it has been the custom of late to believe. This belief has doubtless led to some of the disappointments in the use of the anti-streptococcic serum. I believe, also, that, judging by the results obtained from the use of the anti-diphtheritic serum, we are expecting too much from the anti-streptococcic serum. While some reports show that the latter does sometimes act as positively in reducing temperature and pulse, and causing a rapid subsidence of all symptoms, as does the anti-diphtheritic serum, yet in others which show no immediate subsidence of symptoms at first, its continued use, I

am beginning to believe, may so fortify the system as to prevent that general systemic infection which usually causes the fatal termination of these cases, and leave only the local and less dangerous sequelæ to be dealt with.

While writing this paper this phase of the serum treatment, I believe, was illustrated in a case of streptococcic infection that I have seen several times in consultation with Dr. George E. Ranney, of Lansing. The case was a primipara in whom there had been a slight laceration of the perineum inside of the fourchette, forming a pocket, which was the starting point of the infection. The form of infection was found by culture to be pure streptococcus, and its source was quite conclusively proven to us to have been tonsilitis, as the nurse who cared for the patient had just recovered from the disease, which she contracted from a number of cases in one family which she had been nursing.

I saw her on the fifth day after confinement. Her temperature was then 104° and had been nearly that for forty-eight hours. A thick membrane covered the surface of the perineal laceration and other abrasions of the vaginal wall. The cervix had not been lacerated and there was no membrane upon it. The lochia had ceased, but there was no tenderness or undue engorgement of the uterus. Goodell's endometritis mixture of iodine, carbolic acid and chloral was applied to the membrane where found in the vagina, and the nurse was instructed to use the peroxide of hydrogen, by vaginal injection, 2 drachms every two hours during the night. Nuclein solution and quinine were prescribed. The next morning the temperature was normal and remained so until toward evening, when it began to rise and increased steadily until noon of the seventh day, when it registered 103°.

I saw her again at that time and found the membrane nearly gone from the vaginal abrasions, but a new growth of it had formed in the cervix, which completely encircled the os and passed up into the cervical canal. The uterus was much larger than at my previous visit, and was apparently thoroughly infected. The only applications made since my last visit had been by the use of the peroxide of hydrogen and hot douches. The iodine mixture was again thoroughly applied inside the uterus and to the vaginal abrasions, the douche used, and the vagina loosely packed with iodoform gauze, and these applications Dr. Ranney continued to use twice daily afterwards. As the positive diagnosis of streptococcus had been made, the use of the serum was begun, 10 cubic centimeters being used hypodermically every twelve hours until three doses were given. The use of nuclein solution and quinine was continued. This treatment was continued until the thirteenth day, with the patient constantly improving, and as the membrane had ceased to form, the gauze vaginal packing in the vagina was discontinued and more frequent douches used, the nurse giving the vaginal injections every three hours and Dr. Ranney the intra-uterine three times daily. At this time the uterus was small and well contracted and all abrasions appeared healthy and free from membrane, but an exudate had developed in the left broad ligament, and this had caused an exacerbation of temperature. The patient had had nine doses of the antitoxin, and as the membrane had ceased to appear it was decided to discontinue its use.

I saw the patient for the last time yesterday afternoon when, with the assistance of Dr. Jennings, of Detroit, we anæsthetized her and made a careful examination of the exudate, with the view of operation if pus were found. The mass was free from fluctuation and had not enlarged for several days, so no operation was attempted. The general condition of the patient had been excellent throughout the attack, her appetite remaining good. She is in excellent spirits; has no pain excepting after an examination. Has had no symptoms whatever of systemic infection, having had no chill or sweating. Her temperature for the past three days has ranged lower, showing a minimum of 98.5° and a maximum of 102.5°.

It was noted that the reproduction of the membrane was not prevented by the use of the serum, as a discontinuance of the iodine mixture application for twenty-four hours was followed by its reappearance. This may be a noteworthy fact, as, taken in connection with the absence of symptoms of systemic infection, it may indicate one of the limitations of the remedy, while the lack of systemic infection and absence of pus may indicate its true and only value. It certainly does not act in the same manner as the diphtheria antitoxin serum, but if we find that patients infected so violently as this one was recover under its use, while others under the usual form of treatment, without its use, usually die, then we must endorse it; and time, with close observation of symptoms when it is used, will demonstrate other minor points which will give the remedy a more scientific position in therapeutics.*

Thus far there are but two available serums that can be used in the treatment of puerperal infection, namely, the anti-streptococcic and the anti-diphtheritic. Neither of these is of any value in the treatment of the disease if due to any other infection than the one that it is made to combat. The anti-diphtheritic serum, if properly made and preserved, is quite uniform in its action and may be as confidently depended on to cure puerperal diphtheria as it is when used for the disease where the membrane is found in the air passages. I have used it successfully in six cases in which the diagnosis was verified by bacteriologic examination, and with equal success in two cases supposed to be diphtheritic, in which no bacteriologic diagnosis had been made. Unfortunately, my experience with the anti-streptococcic serum is not so happily uniform in its beneficial action, even in cases of pure streptococcic infection. In some cases it works as positively as does the anti-diphtheritic serum, while in others, without any known cause, the serum being the same, and the cultures apparently the same, no apparent results are obtained. Various conjectural causes have been advanced for this variation. One is that there are different varieties of streptococci which

*Patient did well till May 28, when her temperature rose to 105° and continued high until June 1, when abdominal section was made and the left Fallopian tube, distended with pseudo-membrane, removed. (Culture showed streptococcus and staphylococcus.) No pus found. She recovered from the operation, but died in a uræmic convulsion, due to nephritis, three weeks later.

are affected differently by the serum. Another is that the action of the streptococci produces changes in the fluids and tissues of the body after a certain time that tend to annul the action of the serum. Both theories seem reasonable. There is certainly often a great difference in the activity of the different cultures of streptococci.

In one case which I saw in consultation with Dr. Wellings, of Detroit, the woman had had fever for several weeks, and when I saw her the thermometer registered a temperature of 107° Fahr., the culture showed a remarkably slow growth of pure streptococci, and the case was quickly cured by one thorough application to the endometrium of Goodell's endometritis mixture of iodine, carbolic acid and chloral. In this case no secondary foci had formed, and the toxines, which were being manufactured by the one source of supply in the uterine cavity, ceasing to be evolved when their base was destroyed, the system rapidly eliminated the toxins from the blood and rapid recovery resulted.

In another case which I saw with Dr. B. R. Hoyt, a case of mixed diphtheria and streptococcus infection, the diphtheritic element was quickly subdued with the anti-diphtheritic serum, while the streptococcus, having invaded the veins of the legs and caused suppurative phlebitis, was apparently not affected by the anti-streptococcic serum.

On the other hand, a case which I recently treated in Harper Hospital illustrated the efficacy of the serum when no secondary foci existed, although used late in the disease. It was a case of phlebitis, six weeks after confinement, high daily temperature for three days after admission, swelling of right leg, complete rupture of perineum, uterus normal. Streptococci developed in cultures of pus taken inside the vagina. Three doses of the anti-streptococcic serum, used eighteen hours apart, reduced the fever, and the swelling of the leg rapidly subsided. In this case no suppurative secondary foci had developed and the serum acted with great promptness.

In some of the cases of streptococcus infection it would thus seem to be of the utmost importance to use the serum as early as possible in the disease. It should also be used more frequently than is necessary in the use of the anti-diphtheritic serum. My experience and observation would indicate that the best results are to be obtained by injecting, hypodermatically, 10 cubic centimeters once in from twelve to eighteen hours. Three doses thus used will usually demonstrate its applicability to the case, and it then can be used accordingly to the indications, as shown by temperature and pulse. Relapses are very liable to occur with streptococcic infection, which necessitates careful observation of cases that are apparently recovering, so that treatment may be renewed at the earliest indication of a new onslaught of the disease.

There have been a few cases reported in which the serum was thought to have acted unfavorably, but the proof in no report that I have seen has clearly demonstrated this. In one case the serum was used when the patient was almost moribund, and as a last resort, while in others the kind of serum used and the manner in giving it were not stated, so that the probability is that the fault was not with the serum unless it had been allowed to spoil. I have known of a feeling of depression to follow its use, but have observed no serious symptoms that could be attributed to it.

In cases of mixed Klebs-Loeffler and streptococci I first use the anti-diphtheritic serum, as it does its work more surely and rapidly, then follow with the anti-streptococcic.

We know little as to the *modus operandi* of serum therapy. If the beneficial effect is due to a stimulating effect on the white blood corpuscles, then one serum should be useful for more than its own kind of infection, but such is found not to be the case. In an article on "Serum Treatment of Streptococcic Infection," by Dr. E. W. Saunders, in the January (1899) *Journal of Obstetrics*, he says, regarding this phase of the subject: "The exact properties of this serum are only partially determined. It has no antitoxic potency, and its favorable effects have been ascribed to certain antibodies or alexins; that is, certain definite germicidal compounds. But Bordet has clearly shown that this serum has no more germicidal properties than normal serum. He maintains that its principal value lies in its power to stimulate phagocytosis. Italian bacteriologists, however, hold that besides its stimulation of phagocytes it also renders the plasma capable of paralyzing more or less the micrococci. As the medicinal serum *per se* does not affect these microbes, we must conclude that its whole action is a stimulation of the leucocytes. Van de Veld has proved that alexins are secreted by the white blood corpuscles, and this bactericidal substance must be formed in increased quantities under the stimulation of the serum. Therefore, as we know, the anti-streptococcic serum stimulates the leucocytes, and as a result we have more active phagocytosis and increased alexin formation. We have no definite knowledge of any other action. The specificity of this power is still undecided. We know that leucocytes become more potent toward streptococci, but whether other bacteria may also be influenced by this stimulation is an undecided question. Clinical evidence seems to be against the assumption that anti-streptococcic serum acts favorably in other directions. For the present reliance can safely be placed only on its specific activity against the streptococcus. This specific action manifests itself against the streptococcus pyogenes (Rossbach) and the streptococcus erysipelatis (Fehleisen), the identity of which is firmly established. Bullbach, moreover, has demonstrated that an animal immunized to the streptococcus erysipelatis is also immune to the pus-producing streptococcus. From biological investigation the conclusion is justifiable that this serum is valuable in all the clinical forms of septicæmia produced by the streptococcus."

Constitutional medication, as well as the treatment of the local source of infection, should be actively used along with the serum treatment. Nuclein and protonuclein, whiskey, quinine and strychnine are all remedies of value and should be used, the latter three as indicated and the nuclein in all cases. Just how much benefit is derived from the nuclein it is difficult to estimate, but theoretically its administration is correct, and the phagocytes should have the benefit of the theory. I feel certain that the remedy has assisted quite materially in curing

some of my cases. I usually use of the nuclein solution ½ drachm every two or three hours, given in water on an empty stomach. I prefer giving the quinine in from 10 to 15 grains, twice daily, rather than in small doses at short intervals, as I believe it has a more positive effect on the toxins in the system when given in this way.

The local treatment should be instituted only after a careful examination has determined the seat of infection, as it is only in this way that intelligent therapeusis can be applied. The primary seat of infection is not always inside the uterus, but in many cases will be found in abrasions of the vaginal mucous membrane, pockets formed by lacerations of the vaginal wall, ruptured perineum or lacerated cervix. The surfaces of such injuries should be carefully dried and a powerful antiseptic applied to them, and the agent should be such as will act quickly on septic material, membranous exudates, etc., without having the power to destroy the basic zone of granulations which are forming to act as a barrier against the entrance of the toxins into the system. Such an agent I have found in Goodell's endometritis mixture, composed of pure iodine one part, carbolic acid and chloral, of each two parts. It is my custom to apply this to all infected parts once or twice daily, and have the nurse inject about 2 drachms of the peroxide of hydrogen into the vagina every two hours, night and day. If the infection has invaded the uterus the cavity is carefully washed out with the double canula, using any antiseptic solution, dried with cotton on an applicator, then, by means of the glass injection tube, the same carbolic, chloral and iodine mixture is passed up to the findus, about a drachm being used. This is then applied to all parts of the uterine cavity by the use of the applicator, or forceps, with cotton, and the douche again used. The curette should be used with great caution, and never used except to remove pieces of retained placenta, membranes, or other foreign material, as in the ordinary case of infection its action is simply to promote absorption by removing the granulations which nature is throwing up as a breastwork against the invasion of the enemy.

The varieties of infection which are unattended with the formation of a pseudo membrane, such as gonorrhœa, putrefaction and pus-forming bacteria, can with benefit be treated with the intra-uterine application of the iodine mixture once a day for three or four days, but in these cases the intra-uterine douche with permanganate of potash solution, 2 grains to the ounce, or other as efficacious non-irritating and non-toxic agent, should also be freely used as often as from two to four times in twenty-four hours, the solution being as hot as can be borne.

In cases of infection, a ruptured perineum which has been repaired should be inspected frequently, and if the edges of the wound appear infected, the stitches should be removed and the wound carefully disinfected and the open method used. The drainage of the uterus should be free, and if it is not it should be made so by the use of a drainage tube. When abrasions and lacerations of the vaginal wall prove to be the seat of infection, instead of using the peroxide of hydrogen the vagina may be loosely packed with iodoform gauze, after each application, in such a manner as to prevent the opposing sides coming in contact.

The local treatment of all forms of infection may be summed up in one sentence of two words, namely, *thorough disinfection;* and in connection with this I desire to make one point very emphatic, and that is that the use of douches alone is not sufficient in cases in which a pseudo-membrane is present. The membrane in some of these cases is very thick and the agent used in the water cannot be made sufficiently powerful to penetrate it, and the consequence is the growth continues beneath the membrane with unabated rapidity. The development and re-development when destroyed, of this exudate should be as closely observed, and as thoroughly and also as gently treated as though it were in the throat of the patient, as its early and continued destruction is of the greatest importance in gaining and retaining control of the disease.

The hot vaginal douche is useful in reducing the inflammation and attending œdema, removing fluid exudates and débris, and is usually very grateful to the patient. It should be used freely if the attendant is capable of doing it properly. If not the doctor will best attend to that himself, using it before each treatment, or oftener if necessary.

The general practitioner, situated in the country, far from the sources of supply of culture tubes, expert pathologists, etc., will probably ask of what use is all of this scientific diagnosis to him? The knowledge of these things will be of much use to him, even if he has not the facilities for making a bacteriologic diagnosis. In a small community the presence of infectious diseases is usually known well to everyone, so that in a given case of puerperal infection a diagnosis, often by exclusion, can be fairly well arrived at. Erysipelas, scarlet fever, and even tonsillitis, may be the sources of streptococcic infection, while diphtheria—including membranous croup—may be the cause of diphtheria occurring in the genital tract. Both forms of infection produce a white pseudo-membrane which will be found covering the abrasions or lacerations in the vaginal wall or cervix. Pure streptococcic infection is productive of no odor in the discharge from the infected parts, so that unless mixed with the more benign bacteria of decomposition this popular sign of infection will be entirely lacking in this more virulent of all puerperal infections. The diphtheritic infection may also be free from odor until sloughing of the affected areas occurs.

The staphylococcus also produces a white pseudo-membrane which resembles that produced by the streptococcus and the Klebs-Loeffler bacillus, and as the staphylococcus is a common habitat of the epidermis, infection from this source is the most likely, if it occur in a community which is free from the streptococcus or Klebs-Loeffler breeding diseases.

The bacillus coli communis produces no membranous exudate. Its presence is attended with suppression of lochia, purulent discharge, and the early occurrence of serious constitutional symptoms.

Gonorrhœal infection is attended with no membrane, but causes suppression of the lochia when the uterus is invaded, while the characteristic constitutional symptoms of infection are not violent. If the

Fallopian tubes are invaded peritonitis may result, which is usually local in character, but may be general. The history of the case will usually corroborate the diagnosis, as a purulent discharge will usually have been present previous to confinement.

SUMMARY.

Local Treatment.—Early recognition and destruction of pseudo-membrane by topical applications is of great importance. The iodine, carbolic acid and chloral mixture is a safe and efficient application for this purpose. The intra-uterine douche, frequently applied, is of most value in the forms of infection unattended by the formation of a pseudo-membrane, but is useful also in connection with local applications. The vaginal use of the peroxide of hydrogen is useful in all forms of infection. Frequent packing of the vagina, previously dried, with iodoform gauze, is especially useful in cases attended with pseudo-membrane. Inspect infected cases daily with the speculum. Some uncomfortable surprises may thus be avoided, and the local treatment will be made understandingly.

General Medication.—Quinine in large doses twice daily; whiskey and strychnine to support the heart, if indicated; nuclein and proto-nuclein in all cases; mercurial and saline cathartics at first in all cases, then as indicated. Serum therapy to be applied in all cases when the Klebs-Loeffler bacillus or the streptococcus can be demonstrated by bacteriologic examination to be present, and also in all other cases when such examination has not been made, but in which these specific varieties of infection are probably present. Streptococcus antitoxin serum is to be used persistently to prevent pus formation and symptoms of systemic infection, even if local symptoms and high temperature persist.

THE THEORY OF THE CIRCULATION IN THE NERVOUS SYSTEM AND ITS RELATION TO INSANITY.

By Herman Gasser, M. D., Platteville, Wis.

IRCHHOFF says: "All internal processes constitute consciousness. There are no individual modes of consciousness. The processes of consciousness are dependent on the entire nervous system, not on the cerebral cortex alone. . . . . Mental diseases are not merely diseases of the brain, but diseases of the person. . . . Mental disorders are always complicated and are never confined to a single tract."

This is the best all-round and comprehensive generalization, not only of insanity, but the function of the nervous system, and of which consciousness is a part, that has been made. Its value lies in the fact that they are related processes of the general function of the nervous system.

Without here going into an elaborate analysis of the various states of feeling, with its moods, its pleasures, pains, and states of consciousness, we can confidently state that all forms of insanity are the results of nutritive changes and gross pathological disturbances in the cortical cells of the brain.

This proposition at once clears the field of our investigation from all those painful and pleasurable states of feeling localized in every part of the body, as well as the general states of healthy feeling. By this process of elimination we greatly circumscribe our attention to what insanity is, why it is, and where the organ of its production is located.

But again, that we may still better concentrate our attention to what insanity is, we will yet more dogmatically state that it is a disease of the cortical portion of the brain, as a rule general in character, the disturbed or changed physiological function of which is expressed in disturbed and changed states of consciousness we call insanity.

There is a change in mood or state of feeling that has, as a rule, a painful cast. It may assume every form, from the painful or depressing melancholia, to even the cheerful but acute maniacal. These are what we term "psychic pains." They are, nevertheless, produced in the same way as all pains in general. Their seat is in the diseased cortical cells of the brain. Every changed and painful state of feeling means a pathological condition, as every pathological condition means a painful state of feeling. Feeling and consciousness with all their variations are the synopsis of the functions of the various organs of the body as a whole into a related and coherent unity in the cortical brain.

An insane man is one with disease of brain. It is this disease that makes it impossible for him to adjust the sensations into harmony, and gives it a changed and painful cast. This is his insanity.

The organized memories of past experiences still remain, except in severe disease with its dementia. An insane man cured has his organized hallucinations and delusions, especially when they have been protracted and long continued, still. They even influence his judgment along those directions, and yet he is sound and coherent. Without a knowledge of his earlier history insanity would not be even suspected.

They are still influenced by this chronic delusion, but it no longer is a controlling and all absorbing impulse, yet its reality is not even questioned. They are of sound mind, because the delusion has taken a regular, orderly and related place with the other memories. The brain functions normally, as a whole. When insane it functioned abnormally as a whole. This is why insanity is not local, but general. It also is evidence that the memory or belief in the delusion acquired during the insanity is no longer evidence of insanity when it assumes its proper place among the other functions of normal conscious life.

A man with a chronic delusion is not necessarily insane. The delusion may be an organized and healthy memory, and although it might have been received while insane, and may influence his conscious life, so long as it is no longer a controlling impulse, to which all conscious life is adjusted, he is sane, the result of a healthy brain function. All of us, at some period in our lives, have been influenced by delusions. In many they have never been reasoned away, but with never a suspicion of insanity.

But because one still reasons well and has the most acute conceptions of right and wrong is no evidence that he may not be insane, for insanity of the most dangerous type may be that when the first

diffuse nutritive changes take place in the cortical cells of the brain, and in which the established and organized habits of life are not yet interfered with, as we perceive it in the patient's conscious life. His personal testimony is sane. It is cases like these that create so much difference of opinion and controversy. A fully developed case is understood at once by all.

With this pathological basis for our obscure insane let us bring to bear our physiology and psychology as related to the function of the nervous system.

All the sensory "impulses" sent from every portion of the body are correlated into a coherent and systematic unity in the cortical cells of the brain. It is this we call its conscious life. During sleep and unconsciousness there is no insanity, for insanity is the disturbed and perverted function of the diseased cortical cells during conscious activity. It might be stated that an insane act may be unconscious. This, no doubt, may be true, but it does not invalidate the above general conclusion. Why, is so involved we cannot treat it here. They are special but related phenomena, and we are engaged only in general principles.

As this multiplicity of sensations from every portion of the body are being sent into and adjusted in the frontal portion of the diseased brain, although there is no evidence of disturbance of reason and ethics there must be a change in the general tone of these conscious functions that we briefly and accurately express as the state of feeling. The consensus of all the functions of the body, still systematic, vigorous, and active, is clouded over by a change of the general feeling. This we call the mood of the state of general feeling.

We all have varying moods of our vital feelings, but they are transitory in character. When we have nutritive changes in the cortical brain that are persistent in character, we have chronic states of the moods. This is the first stage of insanity.

It must be evident that a patient like this, still retaining his reason and judgment, by intense concentration, may be able to hide his generally changed state of feeling from the ordinary observer, but this conflict within will eventually become so intense that it must give way in an act of volition. What that act of volition will be depends wholly on the organized heredity, social environment and training, and the state of the mood engendered by the diseased brain.

With this complexity of forces reacting upon each other, anything may be possible. This is why each case has its individuality. Eventually the expenditure of these conflicting energies will be along the lines of least resistance. This is such a delicate and involved problem that no man can tell how it will terminate. But even in this most obscure field we often find system. I know of a family in which for three generations, at a certain period in life, nearly everyone of the members hung himself.

To the close observer, after a prolonged investigation, it may be possible to detect these earliest manifestations of the disease we call insanity. That it is obscure, and sometimes past all finding out, must be admitted if the general deductions here presented are true.

Let us approach this subject from the side of heredity. Briefly stated, heredity is organized memory. If the theory of development is true, this is true; for it is but the unfolding of the established and organized memories, and that reaction to the forces of the environment, no matter whether it is only the germ cell, embryo, child, or mature man. In each, not only the organization of the whole, but every cell in its composition, is a materialized memory of past experiences. The measure of the kind of reaction is always limited by its thin state of organized experiences. This is the measure of their development.

As it is the prime purpose of the function of the nerves, that in common with the other tissues of the body, by the physiological division of labor have been organized to transmit their activities into a central organ wherein they may be correlated or united into a related unity, and without which an organism could not exist, it must be readily admitted that the nerves are organized transit lines of motion. This is the prime property of nerve substance; their organized material memory, the result of the physiological division of labor.

This conception holds equally true in the higher or intellectual development, for every transit line of motion by the sensory nerves is organized in the plastic cells of the brain as a related and coherent unity. The stimulus of each sensation causes an increased activity, which nutrition organizes and establishes into a coherent and related unity of function.

It is because the sensory impulses become organized into material memory that not only the higher forms of organisms, but intelligence is possible, for all conceptions are originally conveyed through the senses. Not only the special sensory nerves, but the sensory nerves from every organ and cell of the body are in continuous communication, and that in the central organ, the brain, are united into a related unity.

If the organization of the brain is weak, its organic reproductive memory in the stream of its heredity is weak. This is why insanity is hereditary. This is also equally true of weak kidneys, lungs or eyes, and in exactly the same sense. Some are so well organized that protracted fevers and long continued excesses of all kinds leave them functionally strong and healthy, because they can assimilate them without causing change in the tissues, while in others even moderate stimulation and strain will cause a breaking down of the tissues with changed function, and which we call disease.

The pathological changes, the result of the diffuse nutritive disturbances in the cortical brain cells, like in diffuse interstitial nephritis, are not in all parts equally alike, and the organized and related memories of normal conscious life become disturbed, because some of the cortical nerve cells and their protoplasmic processes that have undergone greater change get out of tune with the others, and as these organic memories of conscious life are almost unlimited in number, we can readily understand how the individual formula of each patient is characteristic. This is why they have false judgments and incomprehensive conceptions, and is why these lacunæ in memory must be of every

variety of order. This, too, is why they no longer appreciate with accuracy time and relation.

We witness this in every variety and form, from the simple disturbances of the immediate present conscious life to the later, simple, instinctive, or what we call the earlier better organized functions of life. The disease marches hand and hand with the nutritive changes in the brain. The symptoms are but the functional expression of the pathological changes.

The evidence of anatomy and physiology, in common with clinical experience and pathological demonstration, clearly indicate that certain special cortical cells can only take up or react to certain special nervous "impulses." That there are, in fact, special local functions in the cortical brain; that these local centers are capable of various degrees of development by well regulated and continued exercise is as familiar as that of the pugilist, contortionist, or sprinter, but in the former as well as in the latter there is still a regular, united, and well adjusted proportion of function; that the excellence of the one, by its very relation, must increase the activity of the others. It is in this way all the sensory activities in the cortical brain work in a harmonious and related unity, and when general brain disease sets in, these higher and better organized functions are, as a rule, the last to give way, for the functions less developed are the first to show the change. They gain a predominance over those which are functionally well developed, and as consciousness, like all forces in general, goes along the lines of least resistance, the better and established functions are the last to give way. This is why in them the simple and customary stimulations of the ordinary sensory functions are the first to produce painful states of feeling, especially in the beginning of insanity; that the less developed and organized brain functions are the earliest to display the changes resulting from the processes of the disease.

The question at once arises: Then why do the insane, as a rule, expend their energy in the destruction of those most closely related and dear to them, like their parents and children? The irritable state of feeling, the result of the disturbed processes of function, produces a "mood" in which there is a disproportion of conscious activities and a painful state of feeling, that, without a real basis, may cause a sudden and violent outbreak. This would be along the lines of least resistance, or the better organized habits of life, and is why it so frequently is brought to home and closest of kin and friends.

Here we see again that reason, love and the higher emotions have no place in formulating a definition of insanity. That it is, in fact, only a state of feeling, the result of the diseased processes, and contradicts every rule of normal experience. That the first evidences of insanity result in changed states of feeling, and we call its moods the result of the diseased processes going on within the brain. That even reason and intelligence on their surface may appear normal, yet underneath them all, as a result of the consensus of function, the general state of feeling is perverted. And as feeling is the fundamental basis for the direction of the various functions of our conscious activities, it must receive prime consideration at our hands. It is the basic element of our conscious life, not only in health, but in disease. It is feeling that directs our life into the various directions. It is the foundation of all consciousness and intelligence. The states of feeling we call puberty change the direction of our activities and attentions very perceptibly. In this field of conscious life new and all-absorbing sensations are launched into the field of existence, where they must be assimilated and adjusted, and upon the proper direction and harmonious relation of which nearly the whole fabric of our social life is built.

From whatever point of view we analyze the conscious volitional life we find that the feelings, with all their variations or moods, play a more important part than our attention heretofore has given them. In insanity and psychology we have built up an all-confounding, awe-inspiring nomenclature, and while it had some system and relation, only skimmed the froth, without a full realization of the fundamental sub-strata beneath that gave them existence. Such work, although somewhat nebulous, has made it possible to formulate a more comprehensive conception, the basic element of which is the state of feeling produced by the changed and diseased function of the brain.

While the methods of investigation in every department of science have been along the lines of the obscure and seemingly unrelated until we have systematized them into a universal relation, at no time in its history could it be so aptly and accurately characterized as did Mark Twain the meaningless and senseless jumble of words upon which "Christian Science" is founded, when he said it reminded him "of a dictionary with cholera"; for honesty, accuracy and ability, with deep and penetrating insight, have been evident on every hand. It was by their persistent and untiring labors that the present system, of which even they had a vague conception, and which even now is in the chrysalis state of existence, has been made possible.

While we pride ourselves and have great cause to be thankful for our present knowledge and system of natural phenomena that have so greatly added to our welfare, comfort and happiness, yet a gap of nearly "twenty-five hundred years elapsed before this simple conception of the descent and natural selection of organisms, clearly expressed by Empedocles, was empirically grounded by Darwin and established as the natural explanation of the otherwise marvelous multiplicity of organic forms." (Verworn.)

It is a common and established observation that the higher we go in the animal series, the greater is the tendency of the nervous system to extend its dominion over all the rest and correlate or unite it into a general whole; while the specialization of function of the various tissues of the body has a characteristic individuality of function, and the nervous system correlates them into a general and related unity, which we call its life, it should be remembered that, although they have varying kinds of activity, they are always related and never at rest. This is demonstrated not only physically, but clinically. It is upon this evidence that biology has formulated the theory of life, which we call "con-

tinuity," a function possessed by all cells and organs in the organism in general.

If these conclusions are true, it must readily be admitted that the theory of the circulation in the nervous system of nervous or vital energy must be a fact.

We have not only the clinical, physiological and biological evidence in its support with the every-day experience in common, but with it the elucidation of many obscure problems in psychology into a related and coherent unity, that without it is impossible.

From whatever point of view we examine the theory of this circulation in the nervous system, we find that it is not only in harmony with, but explains, many of the obscure phenomena of life. "The general principle upon which is based the formation of the cell community, and with it the formation of a more or less close dependence of the individual cells upon one another, is the principle that controls all development." This is only possible by the specialization of function in the nervous system that unites them into a coherent and related unity, and that must be continuous in character. Indeed, to stop it for a moment, no matter whether awake or asleep, would incur instant death.

In the past we have always measured life by consciousness, with all its variations, ebbs and flows; its states of sleep and dreams, and its acute activity in the waking hours that have influenced our judgment. It has caused us to formulate a dual conception of life, a conception, too, that at the present time pervades all thought in general. It is the foundation of every system of religion, as well as the basis of nearly every formulated philosophy.

We still measure life by consciousness, but our conception of conscience as the highest function of bodily life, forces us to the conclusion that it is a part of the same general and related activity we call life, its highest form of existence. But, in fear that this conclusion leads to ultra materialism, let me again state that while the conscious and material are here related to and a part of the same general unity we call universal law, what is this "universal law?" and "material?" It is only our conception, the result of their reactions as expressed in consciousness. We can only know the reactions and formulate them into system by them, but we can never know the reality, for the one, as well as the other, is and always must be an enigma—a mystery.

Why the forces of the world were formulated along the lines of system and order, and by a regular process of development have produced the earth and all therein, including man, with his high order of intelligence, is, and always must be, as great a mystery to the simplest intelligent being as the most profound scientist and philosopher. If you can tell me just how a blade of grass came to be, I can tell you how you came to be. The one as well as the other is bound up in the same mystery. They simply came to be along the same systematic, related, creative process. From this the natural and general conception has been formulated—that there is a Creator.

ON THE PHENOMENA OF ELECTRICITY AND LIFE.*

By J. Mount Bleyer, M. D., F. R. A. M. S., LL. D., New York City.

PART I.

GALVANI discovered, in 1794, that the muscles of animals experience contractions in contact with certain metals. In his view, this contact merely calls out the discharge of a fluid inherent in the animals themselves. The fact was not to be contested, but its explanation was. Lively discussions in the schools of physiology followed, fortunately with a clear understanding that the difficulty could only be determined by experiments. A vast number were made, the name of Volta being connected with the most remarkable of them. Alexander Volta maintained, in opposition to Galvani, that the electricity which produces contractions in the muscles, far from originating in those organs, is introduced by the metals used in the process. In proof of this he constructed, in 1800, the pile that bears his name, and which is an arrangement in which the connection of two different metals becomes an abundant source of the electric fluid. Galvani and Volta were two men of distinguished genius, who thoroughly understood physics and physiology, and advanced nothing heedlessly. Their discoveries were the point of departure for one of the most admirable movements in all the history of science, a movement which is still most active, and is the more remarkable because it resulted but yesterday, as it were, in the complete demonstration that Galvani and Volta were both in the right. Science to-day proves that there is an electricity peculiar to animals, as Galvani declared. It decides, also, that electricity produced by external causes has an influence over animals, as Volta taught. From profound study of the two orders of phenomena it deduces a system of procedure for the cure of very many maladies by electricity. Consequently, an exposition of the relations between electricity and life must begin with examining the electricity that exists naturally, in the same way that heat does, in animals, and then go on to explain the action of the fluid on the organism, whether in a healthy or a morbid state. Such a description will complete what has already been written respecting the relations of life with light and heat—relations that we may to-day consider as forming the features of a new science.

The most authentic witnesses to the existence of animal electricity are fish. The torpedo, the silurus, the gymnotus, the ray, and other fishes, develop spontaneously a more or less considerable quantity of electricity. This fluid, the production of which depends upon the animal's will, is identical with that of common electrical machines; it gives the like shocks and sparks at a certain tension. The apparatus for its formation consists of a series of small discs, of a peculiar substance, kept apart by cells of laminated tissue Fine nerve-end fibers are scattered over the surface of these discs, and the whole represents a sort of membranous pile, usually placed

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in the region of the head, sometimes towards the tail.

These fishes are the only animals provided with an apparatus specially devoted to the production of electricity; but all animals are electric, in this sense, that a certain quantity of that fluid is constantly forming within their organs. The existence of electricity, peculiar to the nerves and muscles, and independent of their special modes of action, has been settled by numerous experiments, particularly by those of Nobili, Matteucci and Dubois-Reymond. To prove the currents of nervous electricity, it is sufficient to prepare a frog's muscle, and touch it at two different points with the two ends of a nerve filament of the same animal. The muscle then undergoes contraction under the influence of the nervous current. Another experiment, as simple, proves the existence of the muscular current. In an animal living or just killed, a muscle is exposed and cuts made in it perpendicularly to the course of the fleshy fibers, and communication effected by the two wires of a very sensitive galvanoscope between the natural surface of the muscle and the surface made by incision. The needle of the instrument then betrays the passage of a current. This muscular electricity may be obtained in tolerable quantity by placing a number of slices of muscle together in the form of a pile. The positive pole of the system will be the natural surface of one of the terminal slices, and the negative pole the cut surface of the other. Such a battery acts upon galvanic instruments, and can even excite contractions in other muscles.

Independent of these nervous and muscular electric currents, other sources of this fluid exist in the animal economy. Currents are produced between the outer and inner surfaces of the skin, in the blood, in the secreting vessels—in fine, almost throughout the whole organism. The experiments, as delicate as original, to which Becquerel has for several years devoted all the activity of his green old age, authorize him now to assert the preponderence of electric-capillary phenomena in animal life. According to this accomplished physicist, two solutions of different nature, both conductors of electricity, separated by a membrane or a capillary space, compose an electro-chemic circuit; and, if we reflect on the anatomical elements of the various tissues, cells, tubes, globules, etc., in their connections with the fluids that moisten them, we find that they give rise to an infinite number of pairs constantly evolving electricity. The blood of the arteries with that of the veins, forms a pair, having an electro-motive power of 0.57, that of a pair with nitric acid being 100. Becquerel explains, by the intervention of these currents, many physiological phenomena hitherto imperfectly understood. Granting the reality of such actions, yet it must be acknowledged that the general doctrine which combines them each with the other, and links the whole together with the various modes of action of the organism, is far from being clear and precise. We need to know how these currents are distributed and circulate, what lines and courses they follow. It is now time for experimental physiology to attack these difficult problems, the solution of which is absolutely necessary for accurate knowledge of vital determinations; that is, for the computation and the estimate of those various factors which are terms in all the equations of organic movement.

Vegetables, too, develop electricity. Pouillet has clearly demonstrated that vegetation throws it off. Other physicists, particularly Becquerel, have proved the existence of currents in the fruits, stems, roots and leaves of plants. Becquerel took a branch of young poplar, full of sap, introduced a platinum wire into the wood and another into the bark, and brought the two ends of the conductors together in a galvanoscope—the needle at once showed the passage of a current. Buff has lately made experiments, taking care not to injure the organs. Two vessels containing mercury receive platinum wires; over the mercury stood water containing the vegetables to be examined as to their electric condition. Taking the leaves and roots, Buff proved a current passing through the plant from the roots to the leaves; in a branch severed from the stem the current passed to the leaves, too. To sum up, the existence of vital electricity is incontestable, though we do not yet precisely understand the conditions of this internal excitement, and know nothing of its true relations with the unity of physico-chemical operations in the living organism.

The latter are, at all events, exceedingly complex. There is in us, and in every organized being, an infinite world of the most various actions going on. The forces penetrating us are as manifold as the materials we are moulded from. In every point of our bodies, and at every moment of our existence, all the energies of nature meet and unite. Yet, such order rules in the course of these wonderful workings, that harmonious blended action, instead of bewildering confusion, characterizes beings endowed with life. Everything in them commands and answers, with balance and counterpoise. Buffon long ago felt and expressed this. "The animal," he said, "combines all the forces of nature; his individuality is a center to which everything is referred, a point reflecting the whole universe, a world in little." A deep saying, coming from the great naturalist as the flash of an intuition of genius, rather than the result of rigid investigation—words which the movement of science confirms with ever stronger proofs, while borrowing from them light for its path.

Having determined that living bodies are in themselves sources of the electric fluid, we next inquire into the nature of the effects produced in the animal organism by electricity under different forms. The atmosphere contains a variable quantity of positive electricity; the earth itself is always charged with negative electricity. It is not yet precisely known how this diffused and silent force originates. Physicists suppose that it proceeds from vegetation and the evaporation of water. Becquerel has quite lately set forth a number of reasons, more or less plausible, for the belief that the chief part of atmospheric electricity is derived from the sun, and diffused by it into space, together with light. Whether this be true or not, while the sky is clear this fluid has no visible effect on human beings; but whenever it accumulates in the clouds, and gives rise to storms, it produces effects that are the most manifest proofs of the influence exerted over

life by electricity. Persons killed by lightning present a great variety of appearances. Sometimes one struck by lightning is killed outright on the spot, the body remaining standing or sitting; sometimes, on the contrary, it is thrown to a great distance. Sometimes the flash tears off and destroys the victim's dress, leaving the body untouched, and sometimes the reverse is the case. In some instances the destruction is frightful, the heart is torn apart and the bones crushed; in others the organs are observed entirely uninjured. In certain cases flaccidity of the limbs occurs, softening of the bones, collapse of the lungs; in others, contractions and rigidity are remarked. Sometimes the body of the person struck decomposes rapidly, but at times it resists decay. Lightning, which shatters trees and overturns walls, seems not to produce mutilations in animals at all readily. When the stroke does not produce death, it creates at least serious disturbances—sometimes temporary, but oftener beyond remedy. Besides the burns and various eruptions noticed on the skin of those struck with lightning, they often suffer, very curiously, a complete loss of hair; they are affected with paralysis, dumbness, deafness, amaurosis, or imbecility. In brief, the destructive attacks of atmospheric electricity touch all the functions of the nervous system.

The action of electric fishes may be likened to that of lightning, in being independent of our intention. The shocks of the gymnotus are particularly formidable. Alexander Humboldt relates that, having put both his feet on one of these fish, just taken from the water, he experienced so violent a shock that he felt pains in all his joints the rest of the day. These shocks throw the strongest animals down, and it is necessary to avoid rivers frequented by the gymnotus, because, in attempting to ford them, horses or mules might be killed by the discharges. To capture these fish the Indians drive wild horses into the water, stirring the eels up out of the mud by their trampling. The yellowish, livid creatures press against the horses under their bellies, throw down the greater part and kill some of them; but, exhausted in their turn, they are then easily taken with the aid of small harpoons. The savages employ them to cure paralysis. Faraday compares the shock of a gymnotus, which he had an opportunity to study, to that of a strong battery of fifteen jars. A live eel out of water, when touched by the hand, communicates a shock strong in proportion to the extent of surface in contact, and the stroke is felt up to the shoulder, and followed by a very unpleasant numbness. It may be transmitted through twenty persons in a chain, the first one touching the back, and the last the belly of the eel. The fishermen discover the presence of an eel in their nets by experiencing a shock in throwing pailfuls of water on, to wash them. Water is a good conductor, and this fish kills or benumbs the animals it feeds on by delivering a discharge through the water.

Other sources of electricity are known to exist, besides thunderstorms and fishes. Friction machines, batteries and induction instruments, yield three kinds of currents that act on vital functions, sometimes in a similar way, but oftener with marked differences, which have only recently been clearly distinguished. The action of static electricity, and that of electricity of induction, more sudden and violent, is particularly marked by mechanical effects so striking that they have long distracted experimenters from examining with due attention those effects of another sort, produced by the galvanic current. Yet, the latter in reality affects the animal tissues in a deeper way, and its resulting phenomena deserve the liveliest interest from a theoretical point of view, as well as from their applied uses.

Dutrochet proved, by remarkable experiments, that when a tube, closed below by a membrane, and containing gum water, is placed in a vessel containing pure water, the level of the gum water rises little by little through the gradual introduction of pure water into the tube, while a certain quantity of the gum water inside mingles with the pure water outside. In a word, a mutual exchange takes place between these two fluids, communicating by the membrane, and the current, passing from the thinner liquid toward the denser one, is ascertained to be more rapid than that moving in the opposite direction.

This experiment reveals one of the most important phenomena of life in plants and animals, noted by the word endosmosis. Now, Dutrochet had before observed that if the positive pole of a battery be inserted in the pure water, and the negative pole in the gum water, the acts of endosmosis are effected more energetically. Onimus and Legros discovered further, that, if the contrary arrangement be adopted, that is, if the positive pole be placed in the gum water, and the negative pole in the pure, the level of the liquid in the tube descends noticeably, instead of rising. Electricity, therefore, can reverse the usual laws of endosmosis. It exerts an influence not less distinct on all the other physico-chemical movements taking place deep in the organs. In them it decomposes the salts, coagulates the albuminoid elements of the blood and the tissues, just as it does in the vessels of the laboratory. Take a very curious instance: In chemistry, on decomposing the iodide of potassium, iodine is freed, and betrays itself by the tinge of intense blue which it develops on contact with starch. Now, if an animal be injected with a solution of iodide of potassium, and then electrified, it is noticed, after a few minutes, that all the parts near the positive pole of the battery turn blue in presence of the starch, proving that they are impregnated with iodine. The iodide has been almost instantly decomposed, and the iodine carried by the current toward the positive pole.

It is not surprising, then, that the action of electricity influences the whole system of the nutritive operations. Onimus and Legros found that ascending continuous currents quicken the two-fold movement of assimilation and diassimilation. Animals electrified under certain conditions throw off a greater proportion of urea and carbonic acid, proving a higher energy of the vital fire. On the other hand, if young individuals, in growing development, are subjected to the action of the current, they grow tall and large more quickly than in ordinary circumstances, furnishing the proof of an increase in the quantity of substances assimi-

lated. To show how far vital phenomena are stimulated by electricity, we will cite another experiment, made by Robin and Legros, on noctilucæ. These are microscopic animals, which, when existing in great numbers in sea water, render it almost as white as milk, and at certain times phosphorescent. Now, a current, directed into a vessel filled with such water, suffices to bring out a trace of light marking all its course. Electricity stimulates the phosphorescence of all the noctilucæ met on its passage between the two poles.

Interrupted currents, or currents of induction, contract the blood vessels and slacken the circulation in almost every case; if they are intense, they even effect its complete check by a strong contraction of the little arterial branches. Continuous currents do not act in this way; usually they quicken the circulation, while occasioning an enlargement of the vessels; at least, this has been established by Robin and Hiffelsheim, in the microscopic examination of the flow of blood under electric stimulus. Onimus and Legros afterward proved that these movements are governed by the following law: The descending current dilates the vessels, and the ascending current contracts them. A striking experiment proves the value of this law: A part of the skull of a vigorous dog is removed, so as to expose the brain. The positive pole of a pretty strong battery is then placed on the exposed brain, and the negative pole on the neck. The slender and superficial vessels of the brain contract visibly, and the organ itself seems to collapse. Arranging the poles in the contrary order, the reverse is remarked; the capillary vessels swell and distend, while the substance of the brain protrudes through the opening made in the walls of the skull. This experiment proves the possibility of increasing or lessening at will the intensity of circulation in the brain, as, indeed, in any other organ, by means of electric currents. Onimus lately made an equally interesting experiment. Many persons know that the famous physiologist, Helmholz, introduced into medicine the use of a simple and convenient instrument called the ophthalmoscope, by means of which the bottom of the eye may be quite distinctly seen; that is to say, the net formed by the nerve-fibers and the delicate vessels of the retina. Now, on examining this net, while the head is put under electric influence, the little blood tubes are plainly seen to dilate and grow of a more lively crimson.

Let us now study the effect of the electric current on the functions of the motor system, and on sensibility. Aldini, a nephew of Galvini, undertook the first investigations of this kind upon human beings. Convinced that the proper study of the effects of electricity on the organs required the human body to be taken at the immediate instant after the extinction of life, he believed he would do well, as he relates himself, to take his place beside the scaffold, and under the axe of the law, to receive from the executioner's hand the blood-stained bodies, which were the only really suitable subjects for his experiments. In January and February, 1802, he availed himself of the occasion of the beheading at Boulogne of two criminals, whom the government willingly gave up to his scientific inquiry. Subjected to electric action, these bodies presented so strange a sight as to terrify some of the assistants. The muscles of the face contracted in frightful grimaces. All the limbs were seized with violent convulsions. The bodies seemed to feel the first stir of resurrection, and an impulse to spring up. For several hours after decapitation the vital centers of movement retained the power of answering to the electric excitement. At Glasgow, Ure made some equally noted experiments on the body of a criminal, which had remained on the gallows nearly an hour. One of the poles of a battery of 270 pairs having been connected with the spinal marrow, below the nape of the neck, and the other pole touching the heel, the leg, until then bent back, was forcibly thrown forward, almost oversetting one of the assistants, who had a strong hold on it. Placing one of the poles on the seventh rib, and the other on one of the nerves of the neck, the chest rose and fell, and the abdomen underwent the like motion, as in the act of breathing. On touching a nerve of the eyelid at the same time with the heel the muscles of the face contracted, "rage, horror, despair, anguish, and fearful grins, combined in hideous expressions on the dead man's face." At the terrible sight one person fainted, and several were obliged to leave the room. Afterward, by exciting convulsive movements of the arms and fingers, the corpse was made to seem to point at one or another of the spectators.

RECENT VIEWS IN REGARD TO TUBERCULOSIS AND ITS TREATMENT.

By Charles Williams, M. D., Philadelphia, Pa.

IT may be said that the past two years have shown practically no advance in the search for a reliable tubercle antitoxin. There are so many conflicting reports regarding the newer, or "tuberculin R." of Koch, and Maragliano's serum, that one almost hestitates to form an opinion as to their worth. No particular advantages over the older form have been demonstrated, however, and many cases show the tuberculin R to be equally as dangerous as the former, and perhaps still more uncertain in its effects. On the whole, they can be said to have added nothing definite and positive to this method of treatment.

The practical use of tuberculin at present is the detection of bovine tuberculosis. This is of the very greatest aid in preventing the spread of the disease and its transmission to human beings, and is one of the brilliant results of modern medical research. The general results of the use of the material in persons suffering from tuberculosis are disappointing, and it has failed to justify the expectations that were held. Some over-sanguine members of the profession have failed to realize the hope awakened by Koch's first announcement of his discovery in this line. But the keenest disappointment has been to the people at large. It is an example of what is becoming more apparent every year, namely: The injurious influence upon medical progress by the newspapers as they are so often conducted. In the wild desire for news they

print results of experiments not yet complete, they misrepresent clinics and the doings of medical associations, and thus extend false hopes of relief to suffering humanity. When these hopes are not realized a distorted conception of medical science is engendered. To the shame of some members of the profession it must be said that they are ever too ready to grant an interview which, though perhaps right in itself, under the deft manipulation of the omniscent (?) reporter blossoms into what is a farce to a medical man, but which is believed by the general reader. The time has come when the profession should endeavor to have the newspapers print solid facts regarding the prevention of disease, instead of articles with scare headlines about imaginary experiments and operations. The evil should be remedied.

Because of the very unsatisfactory results of attempts to destroy the tubercle bacillus and its products in the human body the management of tuberculosis is developing mainly along two lines, viz., prevention and the securing of the highest degree of nutrition to the person attacked. The former is, of course, the great desideratum in all diseases, but especially so in the one in question, because of its universal occurrence, the unsatisfactory results of treatment, and the high mortality. The latter is the natural outcome of the failure to obtain a reliable antitoxin. If the tubercle bacillus cannot be destroyed directly its progress must be antagonized. Hence the necessity of bringing the issues of the infected body to the highest possible degree of nutrition.

Enough is now known regarding the tubercle bacillus to render the prevention of its transmission comparatively efficient. There are various minor ways by which its entrance to the body is gained, but in the vast majority of instances it is by one of two—by inhalation, or the taking of infected food. As the bacilli acquired by the former method are almost wholly derived from the sputa of tuberculous cases the utmost care should be observed in its disposition. Patients should expectorate in cups containing a disinfectant, or, if this is not practicable at times, even plain water will do until the material can be disinfected, the great point being to prevent the sputa from becoming dried. If the cup cannot be had at all times the patient should use cloths or gauze, these being held carefully in front of the mouth during the interval of coughing, and which are kept in a metal receptacle carried for the purpose until disinfection is convenient. Many plans for compelling tuberculous patients to do certain things are advanced from time to time. Some are correct theoretically, but incapable of being put into practical use. If any measures are to be enforced by law one prohibiting promiscuous expectoration could perhaps be made a success. Meanwhile physicians should strive to educate public opinion to demand this of tuberculous people. Sentiment on this question must be aroused, and physicians and populace co-operate to check the ravages of this awful disease Early diagnosis is of the utmost importance.

More rigid inspection of meat and milk will lessen the cases of infection by means of food. Aided by tuberculin as a diagnostic agent, tuberculous cattle should be sought out and slaughtered. Inspection of meats should be more thorough. All suspected milk should be *boiled*, and all used by children predisposed to consumption should be boiled, whether suspected or not.

Much can be done toward averting the disease in the class of children just mentioned. There is still some discussion as to whether there is a distinct hereditary tendency to tuberculosis in some families. However this may be, it is agreed, as Squire (*Lancet*) remarks, that it is a *predisposition* which is inherited, and not the actual disease. In 1,000 families he found an excess of only 9 per cent. in the incidence of tuberculosis in children of phthisical parents, as compared with children of non-phthisical parents. This might be explained by the former living with their consumptive parents, that is with an infective individual. This view is supported by the fact that the daughters, who remain longer at home, were chiefly attacked in these families, the sons being most often affected in families of non-phthisical parents.

Children of tuberculous parents should receive the most careful attention. An infant should not suckle a tuberculous mother, nor share the parents' bed. The diet as the child grows older should be carefully regulated, and the most favorable hygienic conditions supplied. Exercise, baths, open-air life, etc., should receive attention, in order that bodily development may be brought to the highest possible stage. Even the place of residence and the occupation for the adult should be selected with this point in view. Disease of any kind should be guarded against to the greatest degree possible by such persons, because of the increased danger incurred by lowered vitality. Early and decisive treatment should be instituted in every instance, whatever the affection may be.

Squire discusses the question of notification. Correct in theory, its practice is exceedingly difficult. Among the poorer and more ignorant class of people a most careful and constant supervision would be needed. The latter would fail to understand the need of precautionary measures, and the former would probably not be able to carry out many of the prophylactic requirements. Squire believes this plan, if carried out, would of necessity require more special hospital accommodations than can now be had, in order that such patients could be removed from their homes for treatment.

Regarding the treatment of patients after the diagnosis of pulmonary tuberculosis has been made, the present article aims only at giving the views of late writers as to the use of means other than medicinal. What has been said regarding the status of tuberculin as a remedial agent applies to drugs as well. Certain ones give good results in certain cases, as does tuberculin itself. None are reliable.

The open-air treatment of tuberculosis is gaining in favor each year. Osler says that the important thing is for the physician to emphasize the fact that neither the cough, fever, night sweats, and not even hæmoptysis, contra-indicate a full exposure to the fresh air. In summer the patient should be out of doors for at least eleven or twelve hours each day, and in winter six or eight hours. At night the room should be cool and thoroughly

well ventilated. This plan can be carried out quite effectively in the country, but is more difficult in cities, especially for patients who are able to walk about to some extent. Somerville, however, cites an interesting case of a young German, living in London, and who, for certain reasons, could not leave town. He had undoubted tuberculosis, and an out-door life, with a companion to suggest amusements, journeys, etc., was begun. This with a judicious diet and a minimum amount of medication, soon produced a beneficial effect, and the patient after a time left town apparently cured. An important point in his treatment was believed to have consisted in keeping him away from others in a similar condition. This may have been true in his case, but it is equally true that the great majority of city patients would do better if removed to sanatoria.

Sanatoria have given gratifying results in Germany, and are being tried with good success in this country. While a great part of their efficacy lies in the open-air life in a healthy climate, this is aided by the strict rules which are enforced regarding diet, etc., and which cannot be made effective in the patient's home. A recent writer points out the danger of the profession and the public alike becoming over-sanguine in regard to the "open-air" treatment, as they were in the case of the tuberculin treatment. This is undoubtedly true, and it must be borne in mind that some cases cannot thus be cured, and that it is a slow process in many others. Results amply justify further adoption of the method, however.

Fowler (*Lancet*) believes that present consumption hospitals in cities should not be discontinued, but should receive patients temporarily before they are sent to sanatoria. In this way some cases of chest disease would be found to not be tuberculous. Others which were, could be instructed in certain ways while their true condition was being determined, and thus be partially fitted for the new mode of living in the sanatorium.

The proper adjustment of exercise and rest in the open-air treatment is a matter of great importance and is much discussed. Fever is one of the contra-indications to much exercise. In this connection the writer above mentioned gives a table showing the variations between the oral and rectal temperatures in a case under observation, and illustrating the greater value of the latter for determining the degree of fever present. At Nordach the patients take their own rectal temperatures four times daily.

Ransome states that no active exercise which calls into action the muscles of forced respiration can be permitted so long as the rib movements over the parts affected are much restrained. There must be no disturbance of the underlying inflamed tissues, and no dragging upon any adhesions which may have formed between the two layers of the pleura. Another danger to be guarded against in non-quiescent cases is the liability to ruptured vessels in the softened tissue, caused by the increased blood pressure of over-exertion. In the treatment of phthisis exercise and rest are desirable, but rather rest.

One thing which should be avoided by keepers of sanatoria, and also by private practitioners, is the employment of any cast-iron rules as to the amount of exercise taken by the patients. In this matter each case is a law unto itself, and only a careful study of the patient, with perhaps a trial of different methods, will reveal what is best suited to that individual.

Barney believes that if climate is to be at all beneficial, it is in the early stages, and in persons capable of taking active exercise. He also thinks it essential to the majority of phthisical patients to be treated and cured in the same climate in which they have to live and work after their restoration to health. The practice of physicians sending patients to "health resorts" to be cured by climate alone is strongly condemned. At Asheville, N. C., and similar places, thousands of consumptives gather and go about without a medical adviser, creating a dangerous state of affairs for themselves and uninfected persons as well. Barney dwells on the importance of persons who have made an apparent recovery using a thermometer several times daily for at least a year, and reporting promptly to their physician the presence of any fever. This is because fever of any kind may awaken to renewed activity germs which have been for some time quiescent.

Sir Hermann Weber, in a paper read before the International Tuberculosis Congress at Berlin, gives the following indications for the use of climates in different cases of tuberculosis. The constitution of the patient has always to be considered in connection:

1. In cases with limited disease at one or both apices, without or with only a slight amount of fever, nearly all climates can be made use of, but especially high altitudes and sea voyages, if the constitution is a strong one.

2. Cases with limited local disease and high fever must be at first treated in their houses or immediate neighborhood.

3. In the majority of cases with extensive disease of one or both lungs, without fever or only slight fever, treatment at only a moderate elevation, or at warm seaside localities, deserves the preference.

4. In advanced disease with fever, neighboring sheltered health-resorts, with careful supervision, should be recommended.

5. In cases of progressive tuberculosis, with scattered foci in both lungs and much fever, localities near home, or the home itself, are the best places.

6. In cases of chronic, slowly progressive phthisis better results are obtained from warm winter resorts, or sometimes from sea voyages.

7. Quiescent cases with extensive damage or cicatrization, are generally better off at only slight elevations.

8. Cases with albuminuria, without fever, should avoid high altitudes.

9. The complication of moderate diabetes does not exclude high altitudes, but the latter are injurious in cases with advanced diabetes and emaciation.

10. Chronic cases, with much catarrh, require places with as little wind as possible.

11. High altitudes are contra-indicated in chronic cases with extensive emphysema.

12. For the prevention of scrofula and tuberculosis all healthful climates can be used, but high altitudes have advantages against tuberculosis, and marine climates (including sea voyages) more against scrofula.

13. The cure of tuberculosis during the early stages is possible in all climates. But climate itself, without careful medical supervision, is generally insufficient. The patient's blind reliance on the climate often leads to errors, to aggravation of the disease, and to death. For the majority of patients, therefore, treatment in sanatoria should be preferred, but for the treatment of the poor it is a necessity. The erection of numerous sanatoria for the people is therefore a national requirement for the cure, the prevention, and extermination of tuberculosis.

THE PELVIC CIRCULATION.

By Byron Robinson, M. D., B. S., Chicago, Ill.

THE arteries of special interest to the gynæcologist are the uterine, ovarian and pudic. The uterine artery arises from the internal iliac, passes between the broad ligaments to the cervix, supplying it with a thick walled branch. It then winds spirally around the sides of the uterus, sending horizontal branches to supply every segment of its substance, after which it anastomoses with the ovarian. The uterine artery supplies two-thirds of the blood to the uterus. It is tortuously spiral to accommodate sudden enlargements or movements of the uterus, and to carry a large steady blood stream on demand. It passes under the ureter, so that at pregnancy the elevation of the uterus will not kink either uterine artery or ureter. It suddenly enlarges at puberty, and slowly atrophies at the menopause. Should a myoma arise on one side of the uterus the corresponding uterine artery also enlarges. It forms with the ovarian the utero-ovarian vascular circle, and appears to become generally dilated in pregnancy and locally dilated in myoma.

The ovarian artery arises from the aorta just below the renal, and winds tortuously and spirally to the brim of the pelvis, over which it turns and enters the broad ligaments, supplying the ovary and oviduct and anastomosing with the uterine artery. The ovarian artery is long because, as man assumed the upright position the ovary and oviduct with the uterus descended from the region of the kidneys to the pelvic cavity. The properties of the ovarian artery are the same as that of the uterine. One or both of the uterine arteries may be ligated per vaginam, which atrophies the uterus and a myoma if present. The author introduced the operation of ligating the ovarian and uterine artery as low as the internal os. The procedure rapidly shrinks the uterus and associated myoma. The large vessels of the cervix are flexous, but not spiral or tortuous like those of the body. The cervical arteries have remarkably thick coats, which being torn save life by quickly contracting and checking hemorrhage. The uterus may be extirpated without severing the utero-ovarian vascular circle. The horizontal arteries of the uterus only, which supply its segments, will be severed, requiring no ligature—perhaps forcible pressure for a few minutes.

The internal pudic artery is of considerable importance, as it supplies the anal, perineal and vulvar region. It is a branch of the internal iliac and is smaller in the female than the male. It passes out of the pelvis through the greater sacrosciatic foramen, and passing around the ischial spine re-enters the pelvis through the lesser sacrosciatic foramen. It enters Alcock's canal, which lies about one and one-half inches above the ischial tuberosity, and passes toward the clitoris, sending branches to the anus (inferior hæmorrhoidal), to the perineum (superficial and transverse perineal), the artery of the bulb, the artery of the corpus cavernosium and the dorsal artery of the clitoris. In the median line of the perineal region there is no artery of practical importance. The nearer incisions are made to ischial tuberosity the greater the danger of hemorrhage. The internal pudic artery is one of the arteries which it is well to ligate at both ends. The pelvic arteries are little concerned in disease, except the local dilation of the uterus in myoma. Their chief concern refers to rupture and ligation, in limited active life, in one-half the segment of the utero-ovarian vascular circle being tortuous to accommodate sudden movements and enlargements, and the vascular circle being quite independent of the uterus and oviducts, in periodic dilation and contraction, in the small risk of hemorrhage from the utero-ovarian trunks by sending off horizontal branches to the uterus and oviducts, by their remarkable thick coats, and final slow atrophy.

The veins of the genitals are very important to the gynæcologist, not only on account of their own vast office, but also on account of their close anatomic and physiologic relations to the lymphatics. They lie in vast loose beds of sub-serosium. The pelvic veins are generally valveless, and are subject to frequent congestions, and on being wounded are liable to dangerous hemorrhages, especially during pregnancy, when the pelvic vascular system is dilated and hypertrophied. The healthy pelvic veins are remarkably spiral, while pathologic veins are irregularly dilated, straightened out, and the perivascular lymphatics thickened by inflammatory processes. Free venous communication exists by means of chains of plexuses from the external to the internal genitals. The pelvic veins empty into (*a*) the systemic system and (*b*) the portal system. From the valveless condition and their loose beds of connective tissue, they are liable to thrombosis, especially the hemorrhoidal. The uro-genital veins do not correspond to the arteries, are subject to frequent anastomosis and may be double. The left veins are larger and more liable to disease than the right. Peculiar masses of venous collections exist in connection with the genitals. These bundles of veins are: (*a*) the vaginal bulbs, (*b*) the vaginal plexuses, (*c*) the plexus pampiniformus, and (*d*) the bulbs of the ovary. They are subject to congestion and decongestion (erection) and extend from the clitoris to the ovary. The venous plexuses or bulbs consist chiefly of venous lymphatic channels, unstriped muscles and connective tissue.

The left ovarian vein opens at right angles into the left renal vein. It has valves at its upper end. The right ovarian vein opens at an acute angle into the inferior vena cava. It may be valved at its upper end. Pressure without ligature checks hemorrhage from pelvic veins. The valveless condition of the adult portal vein, with its frequent congestion and decongestion, enhances disease, varicosity of the pelvic veins. The pelvic veins are liable to congestion in pregnancy, myoma, in inflammation of the pelvic organs, and also when their beds are disturbed by laceration of the pelvic fasciæ. They are liable to rupture, especially in the broad ligament, forming pelvic hemotoma. The superior hæmorrhoidal vein leads from the hæmorrhoidal plexuses into the portal vein, and thus a communication is formed between the pelvic and portal systems. All the remaining pelvic venous plexuses open into the internal iliac or inferior vena cava.

The lymphatics of the pelvis consist of the lymphatic glands and lymphatic vessels. The glands are the inguinal, lying below Poupart's ligaments, into which the lymph vessels of the external genitals and lower fourth of the vagina and rectum are drained, as for example in bubo; (*b*) the external iliac glands, (*c*) (hypogastric and obturator); the internal iliac glands surround the respective arteries, receiving the lymphatic drainage from the upper part of the vagina, bladder and cervix. The lymphatics of the uterus, oviducts and ovary drain into (*d*) the lumbar glands. (*c*) The sacral glands drain the rectum. All the pelvic lymphatics drain into the lumbar glands which give origin to the thoracic duct. The lymphatic channels and their routes are of practical importance, as they explain the spread of septic material through the system. Lymphatic channels converge through the thoracic duct toward the diaphragm as well as a constant peritoneal current toward the diaphragm. These two facts explain the rapid peritonitis, pericarditis and pleuritis in puerperal and other sepsis. These anatomic and physiologic facts explain how septic matter may be distributed from a genital wound. In phlegmesia alba dolens the anatomic route is clear, how the septic matter may pass from the iliac glands along the perivascular sheaths of the iliac and femoral veins. However, the pathogenic microbes travel in this case against the lymphatic stream. The perivascular lymphangitis originating in the pelvis is frequently accompanied by thrombo phlebitis, whence emboli may float to the lungs, kidneys, liver, spleen and brain, producing sudden death or prolonged illness.

SUDDEN DEATH IN FATTY HEART.*

By Dr. Bureau, of Paris, France.

The name of fatty heart is reserved for that state where there is an abnormal and excessive development of the fat, which also is present physiologically around that organ. When it greatly increases in quantity the fat not only accumulates on the surface of the organ, but it penetrates into the depths of the muscular walls along the connecting interstices. It is always more abundant upon the right ventricle rather than the left, and upon the right side and the apex of the right ventricle. In very advanced cases it may even reach the endo-cardium. The muscular fibres are compressed, atrophied and spread apart without the fat penetrating into the interior of the myocardiac fibres. Hence fatty heart or interstitial adiposis of the heart or cardiac obesity, etc., is an exaggeration of development of a normal part of the heart and therefore should not be confounded with *fatty degeneration of the heart*, in which the fat invades the contractile fibres and arranges itself therein as small droplets, giving rise to *fatty degeneration* of these latter.

A fatty heart may be simple or asssociated with other chronic cardiac lesions. In the simple form the fatty tissue remains localized in the connective tissue and never invades the fibres themselves. This interstitial steatosis brings about a profound disturbance in the arrangement and direction of the muscular fibres. A great number of fibres are compressed and annihilated by the fat tissue and those persisting are atrophied; often they are seen to be in granulo-fragmentating degeneration. But such a form of degeneration is absolutely different from true fatty degeneration. At the same time there is lymphatic stasis and indeed, an abnormal accumulation of leucocytes is observed in the connecting spaces of the myocardium and in the sub-pericardial lymphatic vessels. The pathogenesis of such a cardiac adiposity is difficult of explanation. It seems that lymphatic stasic favors the development of intracardiac interstitial fatty tissue. The atrophy and the degeneration of the muscular elements are due on one hand to the mechanical compression exercised by the interstitial fat and on the other to the profound disturbance of nutrition, from insufficient circulation of blood. It may be added that the lymphatic stasis renders difficult the prompt elimination of toxic products which are so abundant in an organ which functionates with such a notable activity as the heart.

Alongside of these simple cases of fatty heart there are others in which manifold changes may be found. Such are cases of fatty heart in which interstitial sclerosis complicates, partial atrophy or islets or softening due to infarcts, and finally atheroma of the coronary arteries are associated, which latter so frequently coexist with fatty heart. In such cases it is not rare to find fatty degeneration of the fibres. Here the walls of the left ventricle are degenerated fattily, while those of the right are fattily infiltrated. Such an infiltration in these complex cases is explained as a dystrophic lesion due to coronary atheroma. It has been thought that the fatty tissue replaces those cardiac fibres which have been destroyed by sclerosis, therefore there is fatty infiltration by substitution.

If the fatty heart be found chiefly in old persons, associated frequently but not always with atheroma of the coronary arteries, yet it does not exclude its presence from adults and even youthful subjects, for two observations of Prof. Brouardel are recorded where sudden death occurred in youths of thirteen and sixteen years. The sex does not appear to have any great influence, and statistics are contradictory. Fatty heart is not met with exclusively in fat persons, nor do all of these have fatty hearts, but it may be met with in extremely emaciated individuals and particularly in certain cachectic states, as consumption and cancer. A sedentary life, a dietary too rich in fatty foods, the abuse of liquors, and all the causes that predispose to general obesity may contribute to fatty heart, which indeed is often observed in the obesity of gout, in fat diabetics and in hereditary polysarcia. Sudden death may occur in all the varieties of fatty heart.

The Mechanism of Sudden Death.—It is more frequent in the mixed variety of the disease than in the simple form, and the mechanism is different in both states. They had best be studied separately.

Sudden Death in Fatty Heart Associated with Inflammation of the Coronary Arteries.—Fatty heart associated with arterio-sclerosis is the most frequent variety. Out of forty cases collected by Quain it was noted in twelve that the coronary arteries were calcified or obliterated. In others the clinical history revealed clear symptoms of vascular alterations, as angina pectoris and pseudo-apoplectic attacks. In many of the observations of the ancient writers the coronaries were not examined with the method and exactness that is required to-day. This former variety of fatty heart appears under a rich symptomatology, but is dependent more upon the concomitant arterio-sclerosis than the fatty overgrowth. Such patients often present a characteristic face, with a pale complexion of a yellowish color, tired and expressionless eyes, arcus senilis of the cornea, on which latter at one time such stress was laid in di-

*Translated from *La Setlamana Medica* No. 40, 1898, by F. H. Pritchard, M. D., Monroeville, Ohio.

agnosis of fatty heart. Such patients are subject to præcordial pains, with a sense of constriction behind the sternum, pains radiating into the left arm and not rarely presenting actual crises of angina pectoris. The dyspnœa is habitual, continuous, and at night it frequently is accompanied by attacks of cardiac pseudo-asthma, and sometimes by crises or attacks of œdema of the lungs. The brain disturbances are variable, but ordinarily very pronounced, and they may range from simple vertigo to fainting seizures and pseudo-apoplectic attacks (Stokes-Adam's disease).

It is not rare that transitory aphasia, with temporary paralysis of a limb or the face, may be associated. The circulation in such persons is irregular and they often complain of a permanent sensation of cold, and indeed will show one their cold and cyanotic extremities.

The pulse is variable; more frequently irregular and slowed, while the arterial tension is increased. In conclusion all the symptoms of this special variety of fatty heart, the grave form of v. Leyden's classification, are rather under the dependence of arterio-sclerosis than fatty overgrowth of the heart. Therefore, the sudden death is caused, not by the fatty state of the heart, but by the accompanying changes in the blood-vessels.

Death may take place in three different manners:

1. *Sudden Death by Cerebral Hemorrhage or by Pulmonary Oedema.*—Often death occurs from hemorrhage into the brain or during an attack of pulmonary œdema. Kisch considers these two methods as the most frequent ways in which death takes place in old obese subjects and arterio-sclerotics. In such cases the end may always not be sudden, but vary from several hours to a few days.

2. *Sudden Death from Rupture of the Heart.*—Rupture of the heart, so freqently noted in fatty heart, is seen in that state associated with arterio-sclerosis, but never in simple fatty heart. *A priori*, if one call to mind the enormous fatty infiltration of the muscular walls, the disassociation of the contractile fibres and their consequent atrophy, it would seem natural, under the influence of such changes, that the heart-muscle might rupture under certain circumstances.

Nevertheless, simple fatty heart, even if pushed to an extreme degree, does not rupture. Such an accident only occurs in an area of softening following an infarct, due to an obliteration of a branch of the coronary artery. In case of rupture the lesion is nearly constantly seated in the left ventricle, for ruptures of the right are very exceptional, though the fatty overgrowth is greater in that latter part. On the other hand, in such cases, if a systematic search be made, an obliteration of a coronary branch will be found. Fatty changes are therefore not the causes of death.

3. *Sudden Death from Angina Pectoris.*—Death may occur independently of the causes just discussed. In such cases the coronary arteries are more or less atheromatous, their walls are indurated, calcified, their orifices are more or less obliterated, their calibre narrowed. Death then may take place during an attack of angina pectoris. The changes in the myocardium after fatty overgrowth may predispose in a certain degree to the final termination, yet at all events the cause of death is to be sought in the lesions of the vessels.

Sudden Death in Simple Cardiac Adiposis.—A vascular lesion usually is not the cause in cases of simple fatty overgrowth of the heart, yet such an accident may be noted in this variety.

Simple fatty overgrowth of the heart may be noticed in two kinds of individuals. At times it forms a part of general obesity in young and vigorous subjects; on the other hand, it may be observed in old and debilitated persons, but who still are fleshy. Again, it may be localized in the heart alone, while the rest of the body is profoundly emaciated. This is the so-called cardiac obesity of cancerous, phthisical and heart patients. In all these cases life may suddenly end from a fatal syncope.

1. *Sudden Death in Fatty Overgrowth in Young Persons in Good Health.*—Such cases are met with only in boys, youths and adults who are considered as only corpulent, and in whom nothing would indicate or forewarn a fatal termination. The fat which overloads the heart gives notice of its presence by only a few signs. Freqently there are only slight dyspnœa after a violent effort or a prolonged walk, an increased tendency to bronchitis or slight pulmonary stasis, a little œdema around the ankles, which disappears after lying down, and a continual sensation of cold. The heart is found slightly increased in its transverse diameter, with weakening of the first sound; the pulse is often weak, generally slow, anacrotic and sometimes subcrotic or dicrotic. Death may suddenly occur in such subjects without anything pre-existing to pre-suppose such a fate.

2. *Sudden Death in Fatty Overgrowth in Obese, Diseased or Cachectic Individuals.*—Death may occur during the course of a febrile affection, of a cachexia, or of a disease bringing on anæmia. Often the characteristic heart symptoms are but little pronounced. In general, these obese persons bear the invasion of their heart-muscle with fat well until during an intercurrent disease the symptoms of heart weakness set in and the heart suddenly stands still.

Sudden Death in Simple Fatty Overgrowth of the Heart in Anaemic and Cachectic Individuals may, however, be due to other causes which are able to bring about indirect syncope. Direct syncope or that from a heart-lesion is that from rupture of the heart, inflammation of the coronary arteries, infectious myocarditis, syncopal pericarditis, and that variety of fatty overgrowth associated with arterio-sclerosis. And direct syncope may be dependent upon numerous causes, as cerebral anæmia, inhibition, a toxæmia of the cardiac nervous centers or a direct lesion of these centers. But it is not the lesion of the heart that produces the syncope, but it determines its gravity. It is not serious and transitory if the heart is normal, but, on the contrary, it is most serious and perhaps fatal if that organ be weak. It is precisely by indirect syncope that sudden death in fatty overgrowth may occur without any vascular lesions. The enormous disassociation of the muscular fibres by the interstital fat, the atrophy, the rarefaction of the contractile elements, in one word, the weakness of the myocardium following fatty overgrowth, in part predisposes to such accidents and especially aggravates them.

Such syncopes are produced either by cerebral anæmia or inhibition. Cardiac syncope from inhibition is particularly met with in fleshy persons who are apparently in vigorous health. Cases in support of this view have been reported by Brouardel, Servier and others where death was caused by a cold bath, the opening of an abscess, an emotion, an acute pain, etc. Finally, certain neuropathic states predispose to sudden death. In fatty heart in anæmic and cachectic individuals death is produced, on the contrary, by cerebral anæmia. In some cases the invasion of fat may reach so far as to involve the pneumo-gastric. Kennedy reports the case of a lady with fatty overgrowth of the heart, with a slowing of the pulse, which was 55. At the necropsy her heart was found overloaded with fat and the right pneumo-gastric invaded by the adipose tissue. Two conditions predispose to death, in such subjects; the immobility to which they are necessitated, and which goes to increase the heart changes and to decrease its contracting power, and too rapid emaciation, in which the heart, with all the organs, participates in the general emaciation.

Prognosis and Prophylaxis.—The fatty heart is a weak heart. This weakness is felt mostly whenever a febrile disease supervenes or a cachectic state sets in, and especially in youthful persons. The outlook in such cases is more or less grave, according to the variety of the fatty disease.

In conditions of good health in young and vigorous individuals a fatty heart rarely constitutes a danger. Yet a certain susceptibility should not be forgotten, probably in consequence of a special hereditary neuropathic disposition which renders such an accident easy. With such a susceptibility, with syncope complicating, these conditions of the heart take on extremely serious aspects. Hence all such persons should avoid vivid emotions, sudden chilling, violent efforts, and a reduction of flesh should be brought about gradually and with the greatest prudence.

In weak or cachectic corpulent persons sudden death is more to be feared, for to the natural weakness of the heart that caused by the anæmia or cachexia is joined. In such persons whenever febrile affections supervene all violent movements and anything capable of determining cerebral anæmia should be avoided. If the heart-beat become weaker, less perceptible and at the same time the heart-sounds become less audibie, it is well to have recourse to non-moderating heart-tonics, as caffeine, kola, etc

In arterio-sclerotics with fatty hearts syncope is still more to be feared. In such cases the vascular lesions particularly aggravate the prognosis. The treatment and prophylactic measures do not differ from those of the uncomplicated variety of the disease. Anything capable of producing an attack of angina pectoris should be scrupulously avoided, for this is the final ending of such patients.

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Self-reverence, self-knowledge, self-control—these three alone lead life to sovereign power.—TENNYSON.

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NUTRITION OF THE NERVE CELLS.

TO feed the body, to furnish material that will be broken up into heat and force is an easy problem and one naturally solved by the man in the street. To feed the nerve cells, however, in neurasthenia and allied conditions of illness is quite another problem, and one not readily solved by the best minds in the profession. Neurasthenia will not down—old drugs, new drugs or no drugs—till a proper diet is hit upon, either by accident or design, that will furnish the materials necessary for the nourishment of the cell nuclei. In spite of all treatment the tissues waste and the general vitality lowers in keeping up the nutrition of the vital centers.

We have seen in our time various systems of treatment of nervous diseases grow up based upon a dietary, practically hard and fast as to directions, procrustean as to methods, and in consequence wholly empiric and unscientific in character.

In those in which beef was the principal or sole article of diet, it was ordered raw, or nearly so. The great difficulty of digesting it, the moral disgust, and the danger from raw beef caused certain modifications in the methods embodying beef as the principal remedial agent.

Milk, cream and buttermilk have also been the basis of "cures."

The grape "cure," the fruit and nut "cure," and the cereal "cure," have all been exploited again and again, and the patients in each and every case have been stretched to fit the crude ideas of their advisers.

It is, however, a fact that all these "cures" have done good work, and people hopelessly ill have got better or have entirely recovered under their use.

It is also true that great harm and much suffering has resulted in many cases through the wholly empirical character of these methods of treatment.

The founder or discoverer of a "cure" is, in a way, a man of one idea, and the scientific basis for his method is absolutely unknown to him, else the method of treatment or "cure" he evolves would be made to fit the patient, instead of the patient the cure, and all who submitted themselves for treatment would be benefited, instead of only a few.

In comparing these various "cures" we have noted the fact that in all, without exception, uncooked food is made the basis of the treatment.

The reason for this is not far to seek, for from uncooked food materials are derived the only phosphates that can be assimilated and can give the needed nourishment to the cell nuclei.

As albumen coagulates on heating, the proteid phosphates in both animal and vegetable substances disintegrate when heated above 140° F., and the phosphatic molecule becomes as unassimilable and as useless as food for the cell centers as any other form of inorganic phosphates, which are simply absorbed to be excreted.

The latter act only by their presence in the circulation, and can be regained from the urine in addition to the ordinary phosphatic waste, plus a small increase, which seems to show that when given as a remedy to feed the cell centers, their tendency is rather to exhaust the more rapidly the already dwindling food supply.

On the other hand, we find that on feeding underdone beef, fresh milk, cream, buttermilk, cold-pressed cod liver oil, green salads, ripe fruits and nuts—all substances containing *proteid* phosphates in larger or smaller quantities—that there is no increase in the phosphates excreted, but very often a diminution.

The supply contained in the food must go somewhere, however, and it can be clearly shown that it becomes a part of the organism, that is to say, it is assimilated by the cell nuclei.

Upon this simple fact of nutrition is based all of

those pretentious systems of "cure" that have been or are in vogue. It also explains and gives the reason for the benefits derived from their use.

The best plan then to pursue in the treatment of nervous exhaustion and allied forms of disease is to fit a diet to the patient, whose condition should control the directions of the medical adviser. If the absolute necessity for raw material in the diet is recognized, it does not matter what form it takes, provided always that it is agreeable, palatable and easy of digestion.

This one condition satisfied, the remainder of the diet, producing heat and force, may well be left to the natural desires of the patient.

ADVANCING OR RETROGRADING, WHICH?

THERE is a strong pessimistic element in society, ever looking on the dark side of life and insisting that the crimes and the violations of social order recorded in such vigorous language and with such startling headlines in the columns of the daily press, are indisputable evidence that the human race has passed the pinnacle of mental and physical strength, and instead of becoming more harmonious in thought and life, more in accord with nature's laws, is retrograding in body and mind to the lowest grade of human life. In other words, that life is like a pendulum, swinging backward and forward, with no power to ascend beyond a given point, forever stationary on the dial plate of time. The vision is bounded by the present horizon, without taking cognizance of the history of the human race from its early records to the present. The crime and the filth boiling up on the surface of society, instead of being looked upon as the great cleansing process of nature, like the fermentation of the wine cask till all the filth is removed, seem to the pessimist the saturation of society with evil until its very life is poisoned, until it sinks to the lowest grade, then to pause and go over again, the swing of the pendulum repeating the story of rolling the rock up the mountain, then to see it escape from our hands and roll back again with irresistible force to the place from which it started. Is it true, as it is claimed by the pessimist, that the human race is deteriorating in point of development and strength, mental and physical, or do facts show entirely the reverse in all the conditions of the human race and that the world is now moving onward and upward to higher and still higher states of perfection? Slowly and surely drunkenness and lewdness, with its attendant syphilis, are becoming things of the past. We do not have to go far back into the history of the Anglo-Saxon race to find a time when drunkenness was much more rife than at present. Passing over the days of ribaldry which marked the time of Charles II. and the Georges in England to the early history of the American Congress, we find drunkenness was the rule, and almost every night the high officials of government might be found gathered about the gaming tables and in the salons of the avenue. To-day it is the rarest thing in the world that a member of Congress is seen in a state of intoxication. One of the best indications of the strength of a people is the longevity of its members. Recently there has been exhumed from the ruins of Pompeii a number of actuary tables. From these tables we find, as calculated by the life insurance companies, that the expectation of life of the American citizen exceeds by eleven years that of the ancient Italian. The average expectation of life in the United States exceeds by two years that of England, and that of England exceeds by two years that of Europe, taken as a whole.

Another important factor which must be considered with the question of the improvement of mankind, is that of stature. It is a fact that the average American of to-day is a taller man than the average founder of this country. The average Englishman of to-day is unable to encase himself in the armor which his forebears on either side wore at the battle of Hastings. By way of comparison it may be remarked that the American is an inch taller than the Englishman, while the Englishman, in turn, is an inch taller than the average Continental.

The records of the athletes of Greece and Rome in the days of their greatest strength fall far short of those of the present day. At a recent date the athletes of the New World in competition against the Greeks at the Olympian games at Athens broke all the records of antiquity.

In conclusion, it may be said that the peoples of the world are increasing in number from decade to decade. They are increasing still more rapidly in individual accomplishment. Judged from the standpoint of races the white is becoming more and more predominant. The enlightened races are growing longer lived. The subjects of civilization are increasing more slowly; the barbarians are gaining but little, while the savage races are losing. Throughout the world the average length of life, the average intelligence and the average population is increasing from period to period.

In view of facts clearly established we cannot resist the conclusion that the present progress of the 1,700,000,000 of human beings who inhabit this globe is marking that we are on the eve of a development which as far transcends that of the present as the present surpasses that of centuries past.

THE NEW PACIFIC.

UNDER the above title Mr. Hubert Howe Bancroft, the historian of the Pacific States, has made a contribution to historic literature, so clear, concise and thoroughly reliable, so suggestive and logical in its conclusions as to be irresistible. The prediction of William H. Seward some forty-seven years ago, that the Pacific Ocean, its shores and islands, and the vast regions beyond, will become the chief theatre of events in the world's great hereafter, is becoming an established fact.

Of great interest are the chapters on interoceanic communication; resources of the Pacific; the climates of the Pacific; the South Sea Islands; Hawaii, the Philippine Archipelago and the race problem. Both sides of the question represented by the imperialist and anti-imperialist have been critically and dispassionately treated. Then in the ninth and tenth chapters: "It is well to respect precedent," says Mr. Bancroft, "but it is better to respect progress. We hold to precedent so long as precedent is worth holding to. Only the stupidly ignorant never change." "The new awakening," says Mr. Bancroft, "out of which came a new America and a new Pacific with all the evolutions of civilization, came from its own inherent forces and not through any extreme effort.

"Men talk now about what should be the policy of the nation. The nation had no policy in the year 1898. The President had no policy further than to do his duty according to the best of his ability each day as it came to him. There is no harm in such discretion, but while statesmen are laying down the law of the matter a higher law sets in and settles it. Was there a preconcerted plan in the beginning, that we should stir up Spain, liberate Cuba, get possession of the Philippine Islands, and blossom into empire? No. And no more can men make plans for progress to work itself out on in the future than they could have done in the past. The destinies of nations are not governed by acts of Parliament. But howsoever or by whatsoever agency it came, whether by man's volition or from the mysterious unfoldings of the great unknown, the change is upon us, positive and palpable. We are different from what we were, and we shall always be different; we cannot go back if we would. A higher intelligence and a stronger power than our own has moved us from our former course into a way, better, perhaps, or worse, but into another way.

"That war is an evil, that it is brutal, no one questions, but all wars are not base. War is demoralizing when it is born of hatred and jealousy. What were nine-tenths of all the wars of history but displays of bloody fanaticism and the lust of gain and glory? Wars for national independence, for national integrity, for the cause of humanity, are not in the outcome, however they may be in the action, demoralizing, but ennobling to a people, and that throughout all time." And so looking at our war with Spain Mr. Bancroft thinks that there is no American "who can be called a man who is not morally better and stronger by reason of that war."

Mr. Bancroft sums up the whole matter in these lucid paragraphs:

"In the endless discussion over isolation, expansion, imperialism and the sacredness of antiquated maxims and institutions which are not to be tampered with, there is some entertainment and some instruction; but, after all, the arguments are many of them hollow, even those advanced by wise statesmen, as there is always another side to the one side given. It all depends upon the point of view.

"Take isolation. In truth there has been no isolation. China and Japan isolated themselves; the United States never did, but rather invited all the world to come and enjoy our forests and our freedom, until the Irishman met the Chinaman on soil alien to both alike, and demanded, 'What are you doing here in our country?'

"Then, as to expansion. There is no more expansion now than there has been in the past, and as to imperialism, we would say to the politicians, 'Please let us be impartial if we so desire.' So with laws, statutes, constitutions and institutions; there is no harm in regarding antiquity with veneration, though there may be little sense in it, but think and do as we will, the obsolete will always be discarded, civilization will cut off and throw away the useless and decayed in morals, religion and politics, else progress ceases, for progress is simply life and evolution."

THE MENACE OF HAZING.

THE practice of hazing, so prevalent in nearly every college in the land, has reached the danger point to life and limb, and if public opinion does not come to the rescue we may be compelled to record many another instance where death may result, as in the case of the young man at Ithaca the other day.

The subject concerns every parent who has a son who is or may be in college. It is too serious a matter to be dealt with in any other way than *earnestly!* It is cruel to jest about it and call it *fun.* This is a second life that has been sacrified at Cornell for fun, through the reckless folly of its students. How long will a suffering public stand this sort of thing?

It is useless to say these things cannot be prevented. They can be and should be. Suppose every parent who has a son for college should unite in an agreement that no school should be selected where hazing

is permitted, is it not probable that a way would be found to prevent it? If the faculty was held responsible for hazing, is it not fair to assume that it would be stopped? There are many other ways to deal with it, too. Why is it that the police are not allowed to enter the grounds of a college in an eastern city, where only last year there was a serious occurrence? It is the fear of scandal, which outweighs everything else. Give the police the power and they will put an end to it quickly.

A large university should have its own special police, and make them responsible for order. They would be required for duty only at night, as that is the only time that hazing can be attempted.

All sorts of "horse-play" are used, and thoughtlessness and carelessness lead to many a serious danger, as was shown not long ago in a California chapter, where, according to our report, they were initiating a fine young fellow, the son of a rich western politician. The ceremonies had been under way several hours, when the young man was locked up in a dark room while the fraternity went into council. After spending an hour in solitary darkness the boy was led out. The spokesman informed him that they had judged him unworthy of being admitted to the brotherhood. They explained, however, that too many of the fraternity secrets had been disclosed and that he must be killed. He was to have his choice between quick poison or being cut to pieces under a train. The boy took the matter seriously and begged piteously for his life. He offered to make any kind of promise to keep secret what he knew. The boys told him to hurry up with his choice, as he had but a quarter of an hour yet to live. He then started to fight, but was quickly overpowered and bound. He still refused to choose the manner of his death; so a coin was tossed, "heads" meaning poison and "tails" the carwheel route. According to programme it fell "tails" up, and the boy was carried across the fields to a railroad track. His eyes were blinded, his arms and legs tied and fastened with ropes to the rails of a switch immediately alongside the main line. The unfortunate initiate thought he was on the main track. He knew a train was due to pass in a very few moments. Soon it whistled. The boys in the ditch heard the one on the track praying. As the train drew nearer they could see him straining with frenzy at the ropes which bound him. The train passed, and they hurried to release him. The body was limp; he had fainted through fright. Water dashed over his face and whiskey poured down his throat brought him back to life, but not to reason. His mind was utterly gone. The "frat" men put him to bed and sent for a physician. A week passed without improvement, and his parents were sent for. The boy was sent to an asylum, and for six months raved constantly. He is now slowly recovering mental vigor.

And the matter is looked upon as a joke; it is only in *fun!*

It is useless for President Eliot of Harvard to attempt to place all the responsibility upon "public opinion," for if his faculty are not able to maintain order, and have no police to help them in case of *riot*, then they are not competent to conduct such an institution, and have no right to ask us to send them our sons for education.

If "public opinion" could only be organized, something would happen. Let us hope that some "Moses" will yet be found who will lead "public opinion" to help suppress the nuisance of college hazing. Perhaps some club of women will take it up, or else let the mothers form one for this purpose. In some cases it would be best to give the boys a good spanking before starting them off to college.

NAGGING.

A YOUNG woman recently murdered her paralytic aunt because she said "she nagged the life out of me, quarreling, quarreling from morning to night. For years every mouthful of food she ate I fed her. I had to undress and put her to bed and all I received was abuse. It drove me crazy. Goaded to desperation and not realizing what I did I killed her." The nagging spirit which we so often see in households does more to destroy domestic comfort and happiness than any other evil. The husband nagging the wife, the wife the husband, and both the children, shuts out sunshine and turns what should be a happy home into a hell.

THE REVELATIONS OF THE X RAY NOT ALWAYS RELIABLE.

A CHICAGO electric specialist has recently shown that it is not impossible to so manipulate the X ray as to make it in some cases unreliable as evidence in a court of law. The shadowgraph showed the bones of the hand in perfect condition when the hand was exposed with the muscles relaxed, fingers extended and the members generally in a normal condition; but when the same hand was exposed with the first joints of the fingers slightly cramped, the ends of the fingers seemed in the shadowgraph to have been crushed and the bones of unnatural size. Hitherto the shadowgraph has been regarded as proof conclusive of the nature and extent of injury.

The expert stated that he has learned by long experience that it is possible for the operator to be deceived as to the location of the object disclosed by the X ray. As for instance an object arranged on the

outside of the body may be made to appear as though lodged within. However honest the operator may be, unless he is a skilled electrician and possessed of a fair knowledge of anatomy, he may have been deceived and his testimony prove comparatively worthless. It has been found that the presence of poisons in the human body, unless reinforced by other testimony, is not a positive proof of guilt. As the ptomains simulate nearly every vegetable poison so that it is difficult to characterize, then the X ray is not always sufficient testimony in itself, but must be strongly reinforced.

SALICYLATE OF SODA IN DIABETES.

AMONG the numerous remedies recommended for that most intractable disease, diabetes, we find a very strong endorsement by Dr. Litton in the *Therapie der Geyrrwart* of salicylate of soda, a tablespoonful of a 4 per cent. solution every two or three hours. Dr. Litton says the remedy not only reduces in a very marked degree the percentage of sugar, but relieves the nervous and eruptive complications so common in this disease, such as the intense itching, herpes zoster and eczema, and all the various complications of neuralgia. The use of the remedy, Dr. Litton says, not only decreases the amount of sugar but that of urine, and also abates the distressing thirst. Dr. Litton looks upon the remedy more as a palliative than as a curative. For this purpose we have used with great effect, in keeping down the amount of sugar and urine, Fleischman's yeast, a third of a cake dissolved in water, three times a day. Recently, for its effect upon the nervous system, we have given also in connection with the yeast *Arsenauro*, a comparatively new combination, thoroughly scientific in its character, in five drop doses four times a day. The effect upon the nervous system from a theoretical standpoint would be much better than the salicylate of soda. With this treatment we are getting curative results, even in long established cases, much better than we have obtained from any other form of medication.

ICHTHYOL IN WHOOPING COUGH.

DR. SOUTHER gives in the *Australian Medical Gazette* the successful treatment of his four children suffering from whooping cough, with ichthyol in grain doses, given at first every four hours, the ages of the children being from two years and six months to eight years. In two days the dose was increased to grs. ii., then to grs. iii. and grs. iv. every four hours. At the commencement of treatment the paroxysmal cough occurred about twenty-five to thirty times in the twenty-four hours; after four days of the ichthyol the number of bouts was reduced to about six in the twenty-four hours, and at the end of the week from two to three. All the other symptoms improved correspondingly. "I was so pleased with the result that I tried it in ten other cases with almost uniformly favorable results. The only failures I had were when I employed too small a dose. I saw no unpleasant effect in any case from the administration of ichthyol, all the children taking well. I shall be very glad to learn the opinions of others who may have tried ichthyol in pertussis."

THE SURGICAL TREATMENT OF PERFORATION OF THE BOWEL IN TYPHOID FEVER.

DR. W. W. KEEN, in a paper read at the meeting of the New York State Medical Association, October 25, summarizes his views on the operative treatment of typhoid perforation, as follows:

1. The surgeon should be called in consultation the moment that any abdominal symptoms indicative of possible perforation are observed.

2. If it be possible to determine the existence of the pre-perforative stage, exploratory operation should be done under cocain-anæsthesia before perforation, shock and sepsis have occurred.

3. After perforation has occurred, operation should be done at the earliest possible moment, provided,

4. That we wait till the primary shock, if any be present, has subsided.

5. In a case of suspected but doubtful perforation, a small exploratory opening should be made under cocain to determine the existence of a perforation, and if hospital facilities for a blood-count and for immediate bateriological observation exist, their aid should be invoked.

6. The operation should be done quickly, but thoroughly, and in accordance with the technic already indicated.

7. The profession at large must be aroused to the possibility of a cure in nearly, if not quite, one-third of the cases of perforation, provided surgical aid is invoked.

MEDICINE AND LITERATURE.

ARE the above two things incompatible? One would say they were, judging solely from an erudite article under the same heading, which appears in the *Medical Standard* for November. Dealing with "Professional Attainment in the Field of Letters," the writer says (italics ours): "Before the reign of Queen Anne, few physicians occur as authors. Sir Thomas Browne is the most distinguished and perhaps the only one whose writings have received the praise of posterity. * * * The name

of Thomas Linacre had already won the highest place in the annals of medicine. He translated Galen from Greek into Latin, his classical attainments being so remarkable that he was invited to fill the first chair of Greek at Oxford University, *among his pupils being Dr. John Moore, father of the Peninsular hero*, and Erasmus. *He was one of four noted British humorists,* the others being Arbuthnot, Goldsmith and Smollett."

Now Linacre flourished in the fifteenth century, and "the Peninsular hero"—as every schoolboy knows who has read Wolfe's famous elegy—fell in 1809. Presumably, the *Standard* has managed—heavens knows how—to confound Dr. John Moore (*Circa* 1750) with Sir Thomas More, Henry VIII.'s illustrious chancellor. But why, O why, should the first President of the Royal College of Physicians be classed among "noted British humorists," to the total exclusion of Jonathan Swift? "It's all a muddle!"

THE danger to the public of inviting reporters of the daily press to attend medical meetings was lately shown in this city, when a paper on "Alcohol" was to be presented. The paper itself was all right enough to be read to a body of medical men, but it was quite another thing when it was spread broadcast over the country, particularly as it was in favor of using alcoholic stimulants in many cases.

We quite agree with much that the paper contained, but we do not think it wise to furnish the public with excuse for the increase of alcoholic consumption. A moderate alcoholic drinker tried to justify his conduct by quoting this paper to us.

Lay reporters should not be invited to medical meetings, excepting when subjects are to be discussed that are proper for the public to hear. Papers on public health, hygiene, water supply, sanitation, etc., are suitable for the public ear, but strictly medical subjects should not be reported in the lay press. There is a great tendency of medical men in these days to advertise themselves in all sorts of ways, and one of the modes is to have their medical papers reported through the lay press. Decent ethics condemn such practice.

BIBLIOGRAPHICAL.

DEAVER'S SURGICAL ANATOMY. A Treatise on Human Anatomy in Its Application to the Practice of Medicine and Surgery. By John B. Deaver, M. D., Surgeon in Chief to the German Hospital, Philadelphia. In three volumes, illustrated by about 400 plates drawn for this work from original dissections. Vol. I. Upper Extremity; Back of Neck; Shoulder; Trunk; Cranium; Scalp; Jaw. P. Blakiston's Son & Co., 1899.

This immense work, absolutely perfect in artistic and typographical construction, cannot be compared with any other work on anatomy and surgery. It does not take the place of a distinct treatise on anatomy and surgery, but it is a bridge between anatomy, practical surgery and medicine, or, in other words, an anatomy for the physician and surgeon, giving the medical man, the general practitioner especially, a book not previously provided for in medical literature. Notwithstanding the work will prove invaluable to the surgeon and the specialist, it will prove of equal value to the general physician, who while called upon to cope with innumerable emergencies and special cases, has not the means of the hospital facilities by which he can readily acquaint himself with every phase of anatomy, superficial and deep, as applied to disease, and the most modern methods of treatment of injuries. Each section is preceded by an illustrated article on superficial anatomy, showing the surgical and medical landmarks. The treatment of abscesses or other pus collections is carefully given, with anatomic reasons for their occurrence in well defined regions. The second volume will be issued the commencement of the year, and will be speedily followed by the third and concluding one.

THE PHYSICIANS' VISITING LIST FOR 1900.

This is the forty-ninth year of the publication of this useful little diary, which has become so popular. It will be sent prepaid to any address upon receipt of price:

For twenty-five patients weekly, $1; for fifty patients weekly, $1.25; for 100 patients weekly, $2.25.

It is a plain, systematic method of keeping accounts.

P. Blakiston's Sons & Co., Philadelphia.

PULMONARY TUBERCULOSIS. Its Modern Prophylaxis and the Treatment in Special Institutions and at Home. Alvarenga prize essay of the College of Physicians of Philadelphia for the year 1898. Revised and enlarged. By S. A. Knopf, M. D. (Paris and Bellevue, New York), Physician to the Lung Department of the New York Throat and Nose Hospital; Former Assistant Physician to Professor Dettweiler, Falkenstein Sanatorium, Germany; Vice-President of the Pennsylvania Society for the Prevention of Tuberculosis; Fellow of the American Academy and of the New York Academy of Medicine; Laureate of the Academy of Medicine of Paris, etc. With descriptions and illustrations of the most important sanatoria of Europe, the United States and Canada. Philadelphia: P. Blakiston, Son & Co., 1899; pp. 343; octavo.

The first chapter of this interesting book is devoted to data in the history of the disease as well as the history of sanatoria.

Then follow mortality tables by States and countries, pathological proofs of curability, communicability and the means to combat its propagation (covering inhalation, ingestion and inoculation), public prophalaxis, sanitary laws and regulations, with preventive treatment.

The author has visited over thirty of the more important sanatoria and special hospitals in this country and in Europe, and a full description, with cut, is given in each case. There is also a description of an ideal sanatorium, in accordance with the author's ideas of what it should be, with a prospective view as it will appear when built.

The various methods of treatment are discussed fully, and the latest results are given. The last chapter is devoted to clinical evidences of the curability by hygienic and dietetic treatment, and includes important statistics. On the whole we may say that the work is most exhaustive of the subject, contains considerable original matter, is instructive and practical, and should be in the hands of everyone who has anything to do with this class of cases.

BEE-LINE THERAPIA AND REPERTORY. By Stacy Jones, M. D. Second edition: Boericke & Tafel.

The present edition of this work has been very much enlarged and every way improved. Admirably arranged, full of suggestions, of a size easily carried in the pocket, the repertory is one of the best we have seen, not for minute detail, but of that suggestive character which every physician well up in his materia medica will readily appreciate.

THE ABDOMINAL BRAIN AND AUTOMATIC VISCERAL GANGLIA. By Byron Robinson, B. S., M. D. The Clinic Publishing Co., Chicago.

The work of Prof. Robinson, showing a vast amount of literary and scientific research and original thought, has in its composition and the unfolding of its line of thought all the fascination of a novel. One or two extracts from

the work itself will best convey an idea of the plan of the author.

"In mammals there exist two brains of almost equal importance to the individual, and also to the race. One is the cranial brain, the instrument of mental progress and physical penetration; the other is the abdominal brain, the instrument of nutrition and visceral rhythm. A study of the abdominal brain brings to light most important and instructive facts. In the cranial brain resides the consciousness of right and wrong. Here is the seat of all progress, mental or moral, and in it lies the instinct to protect life, and the fear of death. But in the abdomen there exists a brain which presides over organic life. Its great functions are nutrition and visceral rhythm. In this abdominal brain are repeated all the physiological and pathological manifestations of nutrition and rhythm of viscera. It controls nourishment and secretion. It initiates, sustains and prohibits rhythms. It receives sensations and transmits motion. It is an automatic nervous center. It is a physiological and anatomical brain. In short, it is a nervous ganglion; only a ganglion possesses rhythmical power. The abdominal brain is situated around the root of the celic axis and superior mesenteric artery. It lies just behind the stomach, consists of a blended meshwork of nervous ganglia, and is made up of the union of the splanchnics, the pneumogastrics and the right phrenic. A general summary of the abdominal brain is that it presides over nutrition, controls circulation, controls gland secretion, presides over the organs of generation, and influences in a dominant, though not an absolute, control its peripheral visceral automatic ganglia. The ideal nervous system is a ganglion cell, a conducting cell, a conducting cord, a periphery. The symptomatic nervous system possesses all three in an eminent degree. The abdominal brain represents the second ganglion cell. Its thousands of distributing and communicating fibers represent the conducting cord. The various ganglionic machines located in each viscus represent the periphery."

A Text Book of the Practice of Medicine. By James M. Andres, M. D., Ph. D., LL. D. Illustrated. Third edition. Philadelphia: W. B. Saunders.

In noticing a previous edition of this work we commended in emphatic terms the clear, practical and thoroughly scientific presentation of the subject discussed, placing the work in the foremost rank of text books upon the practice of medicine. The revision of the third edition includes the introduction of new subjects: Glandular Fever, Ether Pneumonia, Splenic Anæmia, Neuralgia, Panasthetisca and Periodic Paralysis, and the rewriting of those chapters in which, during the past few years the greatest advance has been made. The preliminary chapter on nervous diseases is new, and deals with localization and the various methods of investigating nervous affections.

The Medical News Visiting List for 1900. Weekly (dated for thirty patients); Monthly (undated, for 120 patients per month); Perpetual (undated, for thirty patients weekly per year); and Perpetual (undated, for sixty patients weekly per year). The first three styles contain thirty-two pages of data and 160 pages of blanks. The sixty-patient Perpetual consists of 256 pages of blanks. Each style in one wallet-shaped book, with pocket, pencil and rubber. Seal grain leather, $1,25. Thumb-letter index, 25 cents extra. Philadelphia and New York: Lea Brothers & Co.

System of Diseases of the Eye. By American, British, Dutch, French, German and Spanish authors. Edited by William F. Norris, A. M., M. D., and Charles A. Oliver, A. M., M. D., of Philadelphia, Pa., U. S. A.

Vol. III. Local Diseases, Glaucoma, Wounds and Injuries, Operations. Pages, 962. With fifty full-page plates and 186 text illustrations. 1898.

Vol. IV. Motor Apparatus, Cornea, Lens, Refraction, Medical Ophthalmology. With fifty-one full-page plates, 211 text illustrations. Philadelphia and London: J. B. Lippincott Company, 1900; pp. 949; octavo.

The third volume is devoted to local diseases in strict logical order, and the authors of the articles are all men with international reputation in their respective departments. The latter part of this volume really constitutes a volume in itself, and deals with wounds and injuries, sympathetic diseases and operative surgery.

We have before us also the fourth volume of this superb "System of Diseases of the Eye," the first in its class in the English language, which embraces the most advanced theoretical and practical views on the subject. The material and the collaborators have been selected with the greatest care, in order to make the work equal to any similar one to be found in any language, and now that the work is all before us we are able to say that the effort has been eminently successful.

The fourth volume considers the relationship between general disturbances and local expressions of such in the eye, making the work a necessity to every general practitioner and specialist in other forms of disease.

The text is easy to read, and the illustrations perfect. The physical part of the work is in the publishers' best art. There can be no doubt that this country now has a "System of the Eye" which can be truthfully denominated as standard.

A Text Book of Materia Medica, Therapeutics and Pharmacology. By George Frank Butler, Ph. G., M. D. Third edition, thoroughly revised. Philadelphia: W. B. Saunders.

The arrangement of the book embodies the synthetic classification of drugs, based upon therapeutic affinities, and is the most philosophical and rational, as well as that best calculated to engage the interest of those to whom the academic study of the subject is wont to offer no little perplexity. Untoward action and poisoning are treated under separate heads. By the former is recorded the effects of *medicinal* doses in developing certain symptoms dependent more or less upon individual susceptibility, not necessarily assuming the aggravation incident to toxic doses, which exert a definite influence regardless of idiosyncracy.

International Clinics. A quarterly of clinical lectures on Medicine, Neurology, Surgery, Gynæcology, Obstetrics, Ophthalmology, Laryngology, Pharyngology, Rhinology, Otology and Dermatology, and especially prepared articles on treatment and drugs. By professors and lecturers in the leading medical colleges of the United States, Germany, Austria, France, Great Britain and Canada. Edited by Judson Daland, M. D. (University of Pennsylvania, Philadelphia), Instructor in Clinical Medicine and Lecturer on Physical Diagnosis in the University of Pennsylvania; Assistant Physician to the Hospital of the University of Pennsylvania; Professor of Clinical Medicine in the Philadelphia Polyclinic Fellow of the College of Physicians of Philadelphia. Vols. II. and III. Ninth series. 1899. July and October. Philadelphia: J. B. Lippincott Company.

One only has to read the titles of the papers in these volumes to be convinced of the importance of the subjects treated, and a glance at the text shows that the elaborations are in master-hands in each case. The articles are illustrated as required.

The article by Dr. Brocq on the treatment of carbuncles and furunculosis by beer yeast has been worth the price of the book to the writer. There is also a very interesting paper on "Superheated Air as a Hæmostatic," by Dr. Hollander, which shows some remarkable results in the treatment of lupus. So we could go on with all the lectures, but our space will only allow us to say that they are practical and useful.

HOSPITAL REPORTS.

CLINICAL LECTURE DELIVERED AT WOMAN'S HOSPITAL, PHILADELPHIA.

By Prof. F. P. Henry, M.D.

CASE I.—HEMORRHAGES DURING TYPHOID FEVER.

This woman you remember that I brought to you before. I regarded the case as one of typhoid fever, and

have had no reason since to think that it was not. The disease is running a typical course, with one or two exceptions. Complications have arisen. In the first place, the woman is pregnant, a condition which we did not recognize at first. On the 21st and 22nd of the month uterine hemorrhages began. This is shown on her chart, as is also the fact that her temperature fell afterwards. The uterus was dilated and curetted, followed by the escape of the ovum. Then she has had, strange to say, hemorrhages from the bowels since this, also followed by descent of the temperature to about 100°, after which the temperature rose to over 103°, and she seemed decidedly worse. On one occasion the pulse has been quite high, up to 145 on the 22nd. Now it ranges between 110 and 120. The temperature now is about 102°, and the woman is much better, so that notwithstanding all the hemorrhages and the abortion, there is certainly hope of recovery.

Now as regards the treatment: Many physicians do not approve of the administration of ergot in internal hemorrhages. I myself believe in its use, especially in intestinal hemorrhages, and never hesitate to use it. We may also use here the pills of acetate of lead and opium every three hours, the lead acting as an astringent, and the opium quieting the bowels.

CASE 2.—CARDIAC INCOMPETENCE. NANHEIM BATHS RECOMMENDED.

This little girl, Mary H., is thirteen years old. She had to be carried in here, as you see, because she is unable to walk on account of great dyspnœa.

On inspection of the chest we notice a great bulging of the left side of the thorax—the heart is so much enlarged. The impulse beat is distinctly visible. It is very diffuse and rapid. There is a slight thrill, and as I feel the pulse once in a while it skips a beat. In spite of the strong action of the heart the arteries are not well filled, and there is much regurgitation. There is a great deal of enlargement, chiefly of the left ventricle. Dullness does not extend much beyond the right sternal border, and merges into the liver dullness. The liver is somewhat enlarged and congested. It is dull a little below the border of the ribs, at least an inch in the mammary line. Of course there is a murmur. You hear a double initial murmur.

A CASE OF SUB-ACUTE INFLAMMATORY RHEUMATISM. METHODS OF TREATMENT RECOMMENDED.

Here is a patient whom you see for the first time, Jennie G., forty-eight years of age and single. Her occupation is housework. She was admitted to the hospital on the 1st of the month. Her mother died of carcinoma of the stomach. The father is said to have died of old age at seventy-one. He may have done so, but there is no reason why anyone should die of old age at the age of seventy-one. Otherwise the family history is very good. She has had measles and scarlet fever, the scarlet fever leaving her with an impairment of hearing. She has had uterine trouble, for which some operation was successfully done. She has had several attacks of malaria, and finally she has had inflammatory rheumatism. She is now having an attack of rheumatism, which I am inclined to consider a sub-acute rather than acute.

This attack began three weeks ago with pain in her back and abdomen, and shooting down her limbs. Later it affected her right wrist, her elbow and shoulder. Now, as is usually the case, her joints are symmetrically affected. You see she is at the end of the third week of an attack of inflammatory rheumatism.

She has been given salicylate of sodium in pretty full doses, a drachm of the solution every two hours, making in twenty-four hours 60 grains of the drug. She has been rubbed with chloroform liniment, and has been drinking lithia water daily. Rochelle salts have been given for keeping the bowels open.

On the 7th an eruption appeared over a large part of her body, which I believe to be due to the medication. I do not think it is the purpuric rash which is often seen in the course of rheumatism, for that is not itchy. This is a blotchy, erythematous eruption, intensely itchy. You recollect that I said she had been rubbed with chloroform liniment. That is a very good application, but I wish to try a lotion or a liniment concerning which a rather extraordinary statement has been made. Now this liniment consists of 10 parts of salicylic acid, 50 parts of alcohol and 100 of castor oil. It is said on good authority that within five minutes after the application of this, salicylic acid will be found in the urine, but whether this is true or not, it is absorbed quickly and relieves promptly. It is said that the same effect is produced by using the oil of wintergreen in place of the salicylic acid. Salicylic acid is not immediately dissolved in water, hence the alcohol is used. The joints should be well rubbed with this liniment, and covered with some delicate material, such as rubber or waxed paper, then the whole covered with cotton. If you want something that is "elegant" to wrap the joint in, use Lester's protective. It is a beautiful tissue. It is quite expensive.

As to the internal medication: While I am an advocate of salicylic acid, or salicylic salt or the other compounds in inflammatory rheumatism, you will see that Osler thinks it has no use but to relieve the pain. Those who were practicing before the introduction of these substances must, I think, see quite a difference in the results of treatment. I believe I was the first to use salicylic acid on a large scale in this city, and I saw a large difference. Others say the same thing.

But I do like to combine alkalies with this treatment. Fuller's alkaline treatment consists in giving large doses of any alkaline salts until the urine is rendered alkaline, and then it is kept alkaline by giving smaller doses. I often give about 10 grains of salicylate of soda with 10 or more grains of bicarbonate of soda. Give it in powder. It may be dissolved in water, then lemon juice added and the whole taken while effervescing.

Or. if you like to, you may prescribe it in this way: 6 drachms of sodium salicylate with 6 ounces of water. Add a tablespoonful of that or two teaspoonfuls to a little water, then add the sodium bicarbonate to it. I usually prescribe it as the powder.

Now we don't know what the cause of these attacks is. We have not yet found the germ of rheumatism. It may be that the nervous system has a good deal to do with it. It may be that uric acid has a good deal to do with it, and I rather think it has, as it does in gout. The two do not seem to be alike in their manifestation and they are not alike in treatment. Hard work with insufficient food will cause rheumatism, yet strange to say, hard work will prevent it. That is, exercise every day to the point of perspiration, would ward off attacks of rheumatism. I have seen people do this. You remember a tale in the "Arabian Nights," where a man was suffering from some disease. A celebrated physician was called in, and he had him get up on horseback and play some game which must have been remarkably like polo. He was to keep on playing until his hand perspired freely. He was told there was some virtue in the handle of the stick which could only be extracted by his working with it until he perspired.

I have seen rheumatic aches and pains disappear under daily exercise to the point of mederate moisture of the skin, and I feel sure that the skin is at fault in inflammatory rheumatism.

You will often see iodide of potassium recommended. I have not seen much good result from its use. The recommendation is often qualified by the statement that it is more indicated in syphilitic rheumatism. I don't think there is such a thing as syphilitic rheumatism.

As to the nervous origin of the diseases: Much is to be said in favor of the theory. Persons with chronic disease of the spine are liable to attacks of acute articular rheumatism. I feel confident that counter irritation over the spine has resulted in benefit in cases of acute articular rheumatism.

CHRONIC CARDIAC DISEASE RESULTING FROM AN ATTACK OF RHEUMATISM.

This patient is thirty-one years old; she was admitted on January 24. There is nothing in the family history bearing on the case. She had measles and whooping cough. At the age of seventeen she had a severe attack of inflammatory rheumatism, which affected almost all of the joints. At the end of a year she managed to get about, but was not strong and well. During this attack she noticed no shortness of breath. Eighteen months ago she had another severe attack of rheumatism. Since that time she has been able to do very little work. She has had palpitation, and pain over the heart. For four weeks before coming to the hospital her symptoms were aggravated. She had shortness of breath and dyspepsia. We found she had a little fever, a very moderate degree, but continued.

The history is enough to attract one at once to the most

obvious seat of the trouble, and we would examine the heart. There is considerable præcordial pulsation. The pulse has been rather lower than natural. There is an increased force of the beat, and the apex is far outside of the normal place, almost out in the anterior axillary line, but still in the fifth interspace. We have a transverse dullness of almost six inches instead of the normal of about three, so that inspection, palpation and percussion bring us to the same results.

I like, in examing by auscultation, to listen both with the ear and with the stethoscope. There are things which you can hear better with the ear. What the stethoscope does for me is that it isolates sounds and you are better able to tell the point of maximum intensity. At the apex of the heart I hear distinctly both sounds of the heart. The second sound is followed by a murmur which is systolic, quite a prolonged murmur, occupying a large part of what should be the silence between the diastole and the following systole. The murmur is distinct at the top of the sternum.

The examination of the other organs is negative, but that the kidneys are affected is shown by the fact that the urine contains some albumin and some granular casts.

Now what are we dealing with? Seventeen years ago she had an attack of rheumatism, and it is impossible to tell whether her heart was damaged by this first attack or not; but I should guess that it was. Now what is the condition of the heart that produces these symptoms? In this case the answer is a difficult one. A systolic murmur before the first sound may be produced by one of two causes; by some disease of the mitral valve itself, or else the same murmur may be produced by the heart's growing too large for the mitral valve to fill in the space that it should. And that, I can tell you, is a very common condition of affairs. Which of the two conditions exists in this case I don't know, and the more I have thought of it the harder it is to make up my mind. It is impossible in some cases to tell, and it is impossible in this case.

There is a murmur in the aortic region transmitted to the arteries. I think it likely that the rheumatism has had some effect on the aortic valves, causing some stiffening. The walls of the heart have been changed, becoming degenerate muscular tissue. She has a hypertrophy. Furthermore, a person like this will never recover so as to have a perfect heart again, because the muscular tissue itself is damaged.

When it comes to the question of treatment we ask, "What is to be done?"

The woman has been put to bed. She has been given 5 minims of the tincture of digitalis three times a day, and on account of her dyspeptic condition 5 minims of the tincture of nux vomica and 1 drachm of compound tincture of gentian, also three times a day. This is the whole treatment she has had, so far as drugs are concerned, and you see she has been kept in bed.

Th likelihood is that in a week or two she will go back to work, and then some time later she will suffer from a return of the same condition. One thing that makes the prognosis worse here is that there is some affection of the kidneys besides the heart trouble. A few years ago we would have said this was Bright's disease, and that the Bright's disease was responsible for her other symptoms. But we are beyond that now. Probably this has all been the result of her attack of inflammatory rheumatism.

If she were the Empress of Russia there is no medical treatment which would make any difference while she is in the hospital. The difference between the poorest and the richest is very small when it comes to some acute condition, which can be treated in a short time at the hospital. What will make the difference is when it comes to some long standing disease like this, where the poor have to go out into the world and work, and the rich can give themselves the most favorable conditions.

CASE OF IMPROVEMENT IN HEART CASE.

You all remember this patient. She has improved and gained flesh, and is going on with her occupation. She had a mitral regurgitant murmur, and you recollect I was not sure whether the murmur were organic or simply anæmic. An anæmic murmur may be regurgitant also; it is when it is heard most distinctly at the apex. If after successful treatment this murmur persists, we are justified in regarding it as an organic murmur. If it disappears, of course the heart is sound. I don't know whether it is still present in this case or not. Long-continued anæmia leads to structural alterations of the valve; this is said to account for the large number of cases of mitral disease where there is no previous history of rheumatism.

It is doubtful to me whether there is a murmur here at all. It was not doubtful before, but very distinct, and I would say there is none present. We may say this patient has so greatly improved as to cause the disappearance of the murmur. Why has she come back to us? Because of an obstinate constipation, which was probably the cause of her whole trouble. Sir Andrew Clark calls chlorosis "fæcal anæmia." A patient of this sort seems doomed to use laxatives all the rest of her life, with changes between a saline in the morning and something like cascara or aloes at night. We can combine with aloes a preparation of iron. One grain of a preparation of iron—the sulphate and carbonate and protochloride are the best. The French use the protochloride much more than we do in this country. They claim it is converted into that in the stomach. It is certainly excellent. We may take 20 grains of the protochloride of iron, 4 grains of aloin, ½ grain arsenious acid, and 1 scruple of sulphate of quinine. Have it made into twenty pills; have it taken three times a day, and if there is much bowel irritation, twice a day.

This patient has very greatly improved. The murmur is certainly very much less than it was before. She is not so short of breath on waking.

TYPHOID FEVER FOLLOWING LABOR.

Our next patient is a house patient. You may have seen her in the maternity ward. Her initials are A. M. She is thirty-five years old, and was admitted for her present illness on April 7. She came in first on January 1, and left on March 26, apparently well. She was in the maternity ward, had a normal labor, and felt poorly the next day after leaving the hospital. These were the first symptoms, of course. If she has an infectious disease, as we believe, she must have acquired it in the hospital. The incubation stage of typhoid fever is about ten or twelve days. If we know anything about it she must have acquired the disease here, where the water is filtered and boiled, and yet sometimes patients use water from the spigot in its pristine purity. There was no other typhoid patient in the ward, and we cannot admit the possibility of contagion. There are those who believe in the possibility. Still, I believe no one in this country believes in this form of acquiring it. Sometimes the disease is communicated in curious ways. I saw one case that was traced to the use of a syringe employed for an enema. There are several cases of this sort. A thermometer might act as the medium. The bacteriologist might say that the syringe would not be likely to carry the disease, because it is hard to find the bacilli in the intestine. I've looked into the matter some, and find that out of 600 colonies taken from twelve typhoid cases, and from the intestines, the typhoid bacillus was found in only ten. It can always be found in the spleen. So the syringe is not apt to be a medium of infection.

Now this patient complained of headache and nausea; her bowels were irregular, she "felt hot" all over her body, then tongue had a light yellowish coating when she came in. The heart sounds were normal, rose colored spots appeared on the abdomen, and the Widal reaction was positive. The temperature has been up to over 104°. There are quite a number of spots still present. They do not show so well on this skin because it is dark and pigmented.

She has obtained the fever, I suppose, through the water. It has been said to be conveyed by drinking water in ninety-nine cases out of a hundred. Another point as to the danger of direct pumpage and the value of sedimentation. This has been demonstrated by a simple experiment. Some water was taken and mingled with earth and sand, then in this was placed a culture of typhoid bacillus. They flourished for some time, but after a while to get the organism it was necessary to go deeper and deeper until finally they had to go to the bottom. This proves that they settle to the bottom with the earth. Again, ignorant people will tell you that you cannot find the typhoid bacillus in the Schuylkill water, nor in any water which is known to contain it. It is like hunting a needle in a haystack. All the same, the needle is in the haystack, and if an animal eats the whole haystack he will get the needle! Water nowadays is a dangerous fluid to imbibe.

Another thing about typhoid fever is that it was first recognized as distinct from typhus in Philadelphia, by the late Dr. William Gerhard, in 1836.

I will not speak of the treatment to any great extent, except to say that those who contend there is no use in giving intestinal antiseptics I think make a mistake, because I think a good many symptoms are due to the common colon bacillus, which flourishes under these circumstances, the presence of the typhoid bacillus, according to some, acting as a stimulus to its growth. By using these intestinal antiseptics, as thymol, I think we can prevent a secondary infection due to the colon bacillus. It is a curious fact, illustrating the antagonism between the two, that typhoid bacillus will not thrive in a filtered culture of colon bacillus, while the colon bacillus will thrive in a filtered culture of typhoid.

TAPE WORM IN CHILDREN.

This little patient has a tape worm. For such a small girl we hesitate to prescribe large doses of taeniafuge. The dose of male fern is from 2 to 4 drachms and to expect any efficiency you will have to give ½ drachm, and though it is the safest, its use is often attended with alarming symptoms.

Cocoanut is a decided taeniafuge, and is recommended for children. She took last year capsules of thymol, and I will give her 2 grains as last year, until she takes 10 grains and have her take it to-morrow—Wednesday—and Friday, and if it does not have any result have her take it again on Sunday. She was eighteen months old when she had the first signs of tape worm, and I think she is the youngest victim I have seen. The thymol we will try again. It is comparatively harmless. Tannate of pelletierine is given from 4 or 5 to 24 grains, but I would not like to give a child 4 grains without supervision. I would rather she would keep the tape worm than take something that would not only kill the tape worm but kill her.

CLINICAL LECTURE.*

By Frederick J. Leviseur, M. D.

Member County Society; Academy of Medicine; German Medical Society; Metropolitan Medical Society; Society Dermatological and Genito-Urinary Surgery; Society Medical Jurisprudence; Etc., Etc., Etc.

Case I.—Pruritus Universalis.—This woman, who is forty-five years old, the mother of five children, all healthy, has herself never previously suffered from any skin disease. She stated that her present trouble began six months ago. If you ask her what is the matter, she will answer, "It itches me," and with these words her face will express intense suffering, while her hand, with the fingers bent and nails converging, will assume the position ready to scratch. The eruption which you see upon her body is nothing else but the result of scratching, rubbing or similar mechanical results. Scratch marks you find most plentiful on those places where the hands have ready access, as on the extensor surfaces of the arms, where are seen some parallel streaks, characteristic products of the scratching nails. On the legs you will notice pigmented areas of coffee-brown color, irregularly shaped, running in the same direction. On the neck she has some spots of somewhat larger size than a silver dollar, where the skin is of a sort of "goose flesh" condition, infiltrated, hard and rough, showing at the same time a peculiar quadrangular marking very aptly described by Brocq and called *lichenification*, on account of the resemblance of the individual lesions to lichen papules. Around the bend of the knee on both sides there is a mixture of lichenification and eczematization. The universal distribution of this pruriginous eruption, as it has been called, and its multiformity, should be carefully noted, and it is easy to exclude eczema, urticaria and pemphigus pruriginosus. Scabies may be excluded by the absence of the characteristic burrows most often found between the fingers, around the nipples, and on the buttocks. Itching is most pronounced when the patient gets warm in bed. The itching due to pediculi vestimentorum predominates during the day and favors certain regions, as shown by the localization of scratch marks, which are found more numerously on the back near the neck and on the belly around the waist, places where the folds of the underwear tightly encircle the body. The itching caused by cimex lectularius is present during the night only, and especially during the small hours of the morning. The patient is not intelligent enough to describe more accurately the sensation of itching which tortures her, but if you question her more carefully you will find that the itching sets in sometimes at night, sometimes during the day, that it begins at first very mildly, that it gradually becomes worse, that she cannot resist the impulse to scratch or tear her skin, that instead of feeling relieved by scratching the itching becomes worse, until it almost drives her insane, then suddenly it ceases and a condition of utter exhaustion supervenes. These attacks of nervous crises appear at irregular intervals and the exciting causes are slight changes of temperature; for instance, when undressing, or going from a warm room into a colder one, or slight mental agitation, anger, jealousy, envy, etc. This case is one of *pruritus universalis*, and the diagnosis is made almost entirely by exclusion, except for the presence and peculiarity of the solitary subjective symptom of itching. Now, it is of the utmost importance to ascertain if this is a case of idiopathic or symptomatic pruritus. Here again we have to exclude several diseases, diabetes, jaundice, nephritis, and, perhaps, cachetic conditions due to carcinoma or sarcoma. I like to include in this list also hernia in the male and fibroma of the uterus. The examination of the urine of this patient shows the absence of sugar, albumin, and bile-acids. Owing to lack of time this examination was made superficially. In looking for sugar more than one test should be employed, for instance, the fermentation test, Fehling's, or Nylander's. If a whole day's quantity of urine cannot be obtained the urine emptied some time after breakfast should be selected for the examination. The examination should also be continued for several days. Bile-acids are present in minute quantities in the healthy urine. In all forms of jaundice they are markedly augmented before the appearance of the bile pigments, as well as long after their disappearance from the urine. We have all reason to assume that the urine is normal in this case. Furthermore there are no symptoms of benign or malignant tumors, though here again a more careful examination would be indicated if time would allow. The case is, therefore, one of *idiopathic pruritus*. Coming to this conclusion we must say that the prognosis is not as favorable as it would be if it was symptomatic. This form of the disease is very chronic and often resists treatment, which on account of the obscure etiology of the affection is mostly symptomatic. It is our task first to alleviate the individual attacks, then to lengthen the intervals between them, and finally to effect a cure. The patient's general condition has to be thoroughly investigated. If constipation is present saline laxatives are indicated, but even if the action of the bowels is regular a dose of Carlsbad salts early in the morning, taken for some time, will act well. Calomel in small and repeated doses should be tried, but not continued too long if not soon followed by a decided improvement. Arsenic, either as Fowler's solution or arsenic pills, commencing with small doses which are gradually increased, sometimes acts well and sometimes fails to do good. Iron and quinine can also be recommended. To cut short a very severe attack—and these attacks may be so bad that the patient has to be restrained from committing suicide—it may be necessary to resort to the sub-cutaneous injection of morphine or the administration of opiates by the mouth. This should be reserved for extreme cases. Bromide of potassium or of strontium, given before retiring, is beneficial in cases where the attacks are followed by general neurasthenia. I very often prescribe trional in 15 to 20-grain doses every second night for a week, for those patients who are troubled with attacks at night. As a rule, it is preferable to avoid all narcotics, and I have mentioned the above remedies as being only beneficial in severe cases. Of other internal medication I would like to mention salicylic acid in medium sized doses. Salicylate of atropia in pills containing ½-decimilligram to 1 decimilligram at night occasionally acts well, and the same may be said of carbolic acid in the form of pills, 1-3 to 1 grain, starting with one pill and gradually increasing the dose. In the latter case the urine has to be watched very carefully. Atropia, arsenic and carbolic acid are always best given after meals. The tincture of gelsemium and the extract of valerian and belladonna, hydrastis canedansis and ergotin are remedies which are advocated by men of great experience. But, it must be

*Delivered at the German Polyclinic, before the Class in Skin Diseases.

confessed, that of all the number of remedies I mentioned only the most popular ones. There is not one which can be depended upon in any case.

The diet has to be carefully regulated. Acting on the theory that the affection is due to the absorption of some toxic poison in some part of the intestinal canal, an exclusive milk diet has been recommended. I have carried out this plan myself in some patients and have seen it carried out by others, but I have never been much impressed by it. I believe it is more important to endeavor to strengthen the patient, no matter how the object is attained. Patients should not smoke; and alcohol, as well as coffee and tea, should be avoided unless the patient requires stimulation. No matter what plan is followed in regard to the internal treatment it should be carried out in an energetic manner, because the mental element plays a great rôle. In regard to the external treatment I cannot warn you strongly enough against the applications of lotions and salves which contain carbolic acid; this latter remedy has been very ably styled the "morphine of the skin," and though its immediate action is very good, it renders the skin very sensitive and soon loses its anæsthetic action altogether. If it produces an eczema, which is very often the case, the patient will be placed in a pitiable position on account of the superaddition of this troublesome affection, and it will be impossible to continue the treatment for pruritus for the time being. Dangerous in a similar way are applications containing tar preparations. Here furunculosis is often produced, and I have seen patients covered with these boils and presenting a pitiable appearance, necessitating treatment in a hospital. It is not uncommon for patients to prefer to be in this condition instead of having the attacks of intense itching. An anti-pruritic remedy which is not liable to produce untoward irritation is menthol, in the form of salve or lotion. Generally speaking, lotions are to be preferred, and salves should only be employed at the start, before the sensation of itching has become general. The well known zinc and calamine lotion can be used as a basis, as follows:

℞ Zinci oxidi 3 ij
Calamin prep. 3 j
Aq. calcis
Aq. menth. pip. aa. ℥iv
M.

To this various remedies may be added, as ichthyol, 5, 6, or even 10 per cent.; or borax, or glycerine, or carbolic acid or tumenol. Weak alcoholic solutions, with or without dilute acetic acid, have also very good anti-pruritic effect, and may be added to a full bath. The most gratifying results are obtained by the application of cooling and protecting dusting powders, as, for instance:

℞ Zinci oxidi
Amyli aa. 3 iij
Acid boric gr. xx
Talci 3 j
Pulv. rad. irid. plur. 3 ss
M.

The well known salve consisting of equal parts of camphor and chloral hydrate, which when mixed coalesce and is easily taken up by vaseline or cold cream, forms an excellent salve to be used at the very beginning of the attack, *i. e.*, only on very small surfaces. If it is possible the patient should try cold shower baths, starting in with a quite cool temperature and gradually lowering it. In some very desperate cases I have had good results from the application of a hot-water bag, shaped in such a manner that it covers the area of the spine. I want to add a word of praise to the use of the Faradic current, which really deserves to be more popular than it is at the present time. I have been able to procure relief from the itching for several days after the application of a mild current. I have mentioned above that slight changes in temperature often produce an attack, and it is a good plan, therefore, to avoid this occurrence. Rest in bed and bandaging with cotton and, perhaps, dusting powder, will cut short an attack sometimes which formerly has resisted all treatment. In conclusion I want to say that in order to cure a case of pruritus the most accurate study of the patient's general condition is of the utmost importance, because the results of these examinations will form the sole basis for intelligent action. Then again, in giving some of the great number of remedies mentioned above a trial we should not change from one to the other in too rapid succession, but we should impress the patient with the fact that it is almost impossible to effect a cure in a very short time, and that the attacks will gradually diminish in severity and number, and will finally disappear.

Case II.—Sycosis.—This next patient is a man, thirty-two years of age, and he has an eruption on his face during the past three months. It started with a little spot in the hairy part right under the chin and it gradually spread, involving, as you see, the hair follicles. Aside from being very disfiguring it is at times annoying on account of the painful itching sensation. Right under the lower lip there is a spot the size of a quarter, which is raspberry-like in appearance; this spot is moist while others are dry and free from pustules which may be found on other spots. To-day I will not speak of the etiology and pathology, but only take up the treatment of this affection. I am a strong advocate of epilation in these cases, and I believe that those who do not recommend it either do not give it a thorough trial or have only met with mild cases. But in a case like this our first object should be to remove the diseased hairs. If you pull one of those hairs you will see at the end a swollen and infiltrated whitish outer root sheath, and you will easily understand that these hairs will act very much like so many foreign bodies, a condition like splinters impregnated with infectious material. In fact, the condition under the lip is very similar to a neglected wound, and I can promise to show you a decided improvement after one thorough epilation. But, if you epilate you must bear in mind that all the diseased hairs must be removed and that the epilation is to be repeated again and again just as an antiseptic measure; this is done in addition to other treatment; this consists of mild lotions and salves, to be applied as long as there is irritation present. I like to start in with the following lotion after epilation:

℞ Aq. calcis
Aq. destil. aa. ℥iv
Resorcin 3 j
M. Sig. This lotion to be applied three times a day.

At night the following is a salve of value:

℞ Emplastr. diachyl.
Vasalini alb. aa. ℥ss.
Liq. et adde
Acid salicylat. gr. v.
M.

After the pustules have dried up and the irritation has subsided stronger salves may be used, as follows:

℞ Hydrarg. sulph. rub. (cinnabar) gr. x
Sulphur 3 iij
Vasalin. flav. ℥jss
Ol. bergam. gtt. xx
M.

This salve is recommended by Lassar and is very excellent, but is to be made stronger or weaker according to the individual case. The patient ought to shave every day, and as close as possible. I will not mention here all the different remedies used, but I want to say a word about the more modern treatment by electrolysis. Electrolysis is the only means by which we can positively destroy hairs, but it is rather slow, and it is always followed by an inflammatory irritation. It is, therefore, evident that small circumscribed spots are well adapted for electrolytic treatment, while cases of general distribution are not. The operation is performed in the same way as you have seen me perform it on previous occasions in the removal of superfluous hairs, using the fine jeweler's broach in a needle holder connected with the negative pole while the patient grasps the positive electrode. From fifteen to twenty seconds are sufficient to destroy the hair, and I rarely use, as current strengths, more than from two to five milliamperes.

The tendency to make the remedies enter deeply into the follicles has given rise to the employment of catephoresis, and some authors claim to have obtained excellent results by its use with solutions of ichthyol. Being an absolute believer in epilation I think we possess in this measure a far more effective way of getting at the bottom of the field, and I think that immediately after epilation our remedies will go just as far as we want them. It is quite often that matters of vanity, where the manly adornment of beauty has to be sacrificed, stand in the way of this procedure. After cases are apparently well shaving should be continued and no attempt made to let the beard grow for months, or even years.

CORRESPONDENCE.

PHARMACOPŒIA REVISION.

Editors MEDICAL TIMES:

Your editorial on the Pharmacopœia revision is timely and the points well taken, but the profession must not expect much relief.

The Pharmacopœia is theoretically exclusively pharmaceutical, a book of formulas with directions for manipulations and tests for purity.

It could easily be made of more value to druggists and physicians as you indicate, but that would affect the sale of the Dispensatories and other commentaries. Trade problems have their influence. The Pharmacopœia was for many years practically unknown as a separate book, in order that the Dispensatory could be pushed, as it yielded a much better profit.

If our busy practitioners would take an active interest in Pharmacopœia revision, and see that we were properly represented, in time we could have a practical Pharmacopœia, that every doctor would want, and that could be sold at a dollar and pay a good profit to the committee.

The present plan of restricting the sale and circulation of the book, and putting the price at a prohibitory figure, may be "useful" in some ways, but hardly from a scientific standpoint.

H. W. SPARKER, M. D.

DOCTORS IN THE ROLE OF DRUG HABITUES.

FOUNDED ON AN ANALYTICAL STUDY OF STATISTICS.

The daily morning papers on the 26th of October, all over this country, were fairly bristling with a surprising story under sensational head lines, fitting only an occasion when something of rare occurrence takes place. The tale of one of the foremost of them read, "Many Doctors Are Morphine Slaves." By this it was known at a glance that the cat was let out of the bag. One was astounded where it could have occurred; it was soon learned by reading on in the article. The State Medical Association had the honor, by Dr. T. D. Crothers, of Hartford, Conn., and a well-fitted gentleman, too, for the task, only we regret without reproaching him in the least, as the truth was only too true; but a provision should have been made beforehand that such a paper should be read and discussed behind closed doors. The accusation was well founded, after a study of facts and figures, when he was appointed as chairman of a committee to collect and study the statistics of the prevalence of alcohol and opium inebriety. He gathered that from 3,244 physicians 20 per cent. were found using spirits or opium to excess; 6 per cent. of this number used morphia openly; 10 per cent. were using opium or other drugs secretly, outside of this number; at least 20 per cent., including this number, used spirits in moderation, so-called. In another study he found 170 doctors. Seven per cent. used opium or morphia and 6 per cent. were secret drug takers. From what we gather, if these alarming figures thus far speak the truth, they show us that at least from 6 to 10 per cent. of all medical men must be opium fiends. This is a strong dose to swallow. However innocent of this accusation the majority of us are, we are classed more or less with the guilty by the lay public's suspicious eye.

Is this not a ripe moment for us to discriminate when we are confronted directly with such a matter of fact truth as told openly, that one's colleagues in large numbers are going, so to say, "to the dogs" by becoming drug slaves? Dr. Crother's figures cannot possibly go amiss, as he is in a position to tell us, being himself a keeper of a hiding place for inebriates of this class, who go to him trying their will-power to shake off excessive debauchery. We must not also forget to add to his list those figures which would tell us still more in the run of other habitues who keep in the dark and imbibe drugs in smaller and larger quantities, remain at large, defy detection, and practice their vice in connection with their professional duties. A grave question arises here: Is it safe for the community to employ a doctor who is more or less addicted? Can any man do justice to his patient and to himself intelligently? Certainly not! Under such circumstances, as has been pointed out to us, how dare we expect to enjoy the confidence of the people if this is not immediately taken strict cognizance of by the entire profession? Some definite and important stand should be promulgated as a remedial agent. A suggestion at such a time may prove to be of some service. Let the chair of either therapeutics or medicine in all schools of medicine, in opening their lectures, begin by cautioning the young and unsophisticated student in the art of handling and giving of drugs, with the most serious words of advice, warning them of the dangerous threshold that they are to stand upon if the heed that is given them is disobeyed; especially that drugging one's self without the advice of a practical physician lays him open to commit a crime against himself and society from the very beginning of his career. All the soundest advice possible should be gathered and examples cited to him, possibly so that he does not go into the snare with closed eyes. As a remedy for the protection of ourselves by accusers in the future and against the public's good, we say that a law should be formulated and urged to be passed by Legislative enactment making it an unpardonable sin against the public, if found guilty of such habits, which so large a proportion of medicine men have been censured with; that a special commission be appointed, and each case which is brought before them thoroughly investigated, and if the circumstances are such, the law should be stringent enough to strip him of his degree, preventing him from the practice of his profession. It is believed that this measure would rouse many from their present torpidity, and prevent others from entering into pernicious drug slavery.

Regarding Dr. Crothers, we but compliment him for having the genuine courage, besides the true manhood, in calling the attention to an important and most appalling situation. There is no doubt that there are existing vices of that order described by him among us—it was not a new surprise to many of us; but the figures—those are the things that horrify!

Everyone who knows the enslaving action of drugs and resorts to them, unless under certain conditions, is not pardonable. Nothing good can possibly await him, knowing all beforehand that the road he takes will carry him straight down to hell! The mere examples of sufferings that are created by them and are brought to our notice daily at the bedside would be sufficient for anyone to abstain from drugs, with their hidden powers over one's independence in the future, that he would almost make of himself an immune, so to say, and further cheat them of their ensnaring powers. There are no words expressive enough, nor any canvas to hold the picture truly, that could tell and show the inward feelings that the poor wretch undergoes in the various phases of delirium within the moments he is trying to rid himself of that cancer—the acquired habit! But how many succeed in shaking themselves away from their bondage? Few, and very few indeed! "The will may be strong, but the flesh is weak."

In addressing ourselves here, we call the attention of the younger element of the profession most earnestly, and commend highly to them the reading of De Quincey, author of "Confessions of an English Opium Eater," and as an example of all let them take a look at the celebrated eight plates drawn by the famous Cruickshank, known as "The Battle." Any library of consequence has them among its collection of art works. These authors both have illustrated in detail the vivid spectacle of the thousand suffering pangs felt by the perniciousness of the taking of opium and alcohol, showing up the mirror of the deluding influences, with its many phases of downward marching, in a bold relief.

We should take to ourselves these and other similar lessons that are brought us often enough and profit by the experiences of these poor fallen sufferers. Let us not forget and adopt also this cardinal rule, which should lie nearest the heart of every physician: Never to prescribe remedies from the list of alcohols to opiates without limiting the dosage and calling him to a halt in due time in every case. Give your remedy, but don't neglect to stop it also, with a warning word. Many examples already lay before us all, and if it is not done at a certain period the patient will of his own accord oftentimes continue the prescribed drug, not only from the relief he obtained from its use, but from the created habitual pleasures it affords him long after. The therapeutic value has ended. We need, as you can learn from facts, to put on a strong brake in each case, and in the proper time; and that must be done at the very outset. To every thinking man such a rule must prove to be a sound one to adopt in these days,

when the usage of powerful alkaloids have come into vogue. If each one of us were to think back into our practice of years we would find among our category at least a number of poor devils that were started on their road to ruin by merely neglecting to call the turn! As for the doctor himself, being the maker often of his own downfall, he himself being equipped with a knowledge of drugs, and then to trust himself to the net that they weave around him, and knowing also that they are the tools of His Majesty the Devil, commits a grave mistake, and an admittance of the poorest of judgment. Such men don't deserve a better fate than that which awaits them.

It is as much to our regret as it is to our discredit, being a trusted profession, to find by a single stroke the public have penetrated into our very bosoms and now are fully cognizant of a secret most uncreditable to us. We all cannot but feel this humiliation of having the general public wrest from us the truth about some of the failings which exists among our number. All this talk could have been avoided if only a little diplomacy had been displayed by holding temporarily the session behind a vail of secrecy, at least during the reading of Dr. Crother's paper. It is too late to say what should have been done. The contents of this record in the minds of the lay people have become the source of much annoying discussion. It cannot but help creating for us unnecessary suspicion in the future in many instances which may come up regarding each one's own tribulations, calls upon which are faced daily.

Papers of that type should at all times receive a hearing only where the profession is alone the audience, which we hope to become a stringent law among all associations.

J. MOUNT BLEYER, M. D., LL.D., F. R. A. M. S.

New York, November 15, 1899.

TRANSLATIONS, GLEANINGS, Etc.

RETROSPECTIVE THERAPEUTICS.

By Alfred K. Hills, M.D., Fellow of the Academy of Medicine of New York, Etc.

Beta-Eucain as an Anæsthetic in Eye, Nose, and Throat Work.—Dr. William H. Poole, Detroit, Mich., reports a series of cases in which this agent was used, and draws the following conclusions:

1. Eucain is decidedly less toxic than cocain, therefore superior to it.
2. Its aqueous solutions keep well, and can be sterilized by boiling without destroying the activity of the drug.
3. It produces anæsthesia equally well and sometimes better than cocain.
4. It is superior to cocain, in that it causes no heart depression or other unpleasant systemic effect.
5. It causes no mydriasis, and no disturbance of accommodation, which is an advantage in some cases.
6. It is less dangerous to the cornea than cocain, inasmuch as it does not cause a desquamation of the superficial epithelium.

Cocain is now about 100 per cent. higher in price than Beta-Eucain.

The Application of the Roentgen Ray in the Diagnosis and Treatment of Coxalgia.—Jesseraud *(Lyon Méd.*, No. 46, 1898; *Int. Med. Mag.)* has fully demonstrated the value of this method of diagnosis in the determination of the exact condition present in cases of coxalgia, and the beneficial influence which it has upon the treatment in these cases. He has shown that the skiagraph will demonstrate the presence of osseous lesions and detect sequestra, making it possible to determine the exact condition of the bone and situation of the lesion, so that if it is simply cartilaginous, or in the incipient stage, it can be treated by extension and rest, while the presence of any grave osseous lesion makes it possible to operate and remove the sequestrum or diseased area of bone before symptoms are present that would indicate it under other circumstances.

Glycero-Phosphates in Graves' Disease.—Graves' disease is best treated by glycero-phosphate of sodium or calcium in average doses, according to Prof. F. X. Dercum, of Philadelphia *(The Medical Herald*, March, 1899). He says that in treating this affection he lets the cardiac symptoms alone, as he believes that there is no use of giving drugs to cover symptoms while the real trouble still goes on. He thinks there is no difference in the activity of calcium and sodium salts, so that either may be chosen with entire confidence. They diminish glandular activity and effect an amelioration of the symptoms. A severe case which he had under observation recently, improved greatly under the administration of 20 grains sodium glycero-phosphates three times a day, given diluted with water after meals. In treating such cases he withdraws the more stimulating foods, such as meat and coffee. Liquors are not allowed. Milk or some simple nourishing food is the best diet, and this with the drugs named checks excessive thyroid secretion, and thus produces a very beneficial effect. Schering & Glatz have a reliable preparation.

Chrysarobin as a Specific for Warts.—In the *Boston Medical and Surgical Journal*, June 29, G. W. Fitz sums up the claims of chrysarobin as a specific for warts as follows:

(1) Success in a series of ten cases of warts on the sole of the foot in which the diagnosis was perfectly clear.
(2) Similar success in one case of warts on the hands.
(3) No failure in any case where the application was made repeatedly on the denuded surface of the wart.
(4) No subsequent recurrence of the warts.

The writer's experience has been that chrysarobin may be applied either in a 10 per cent. solution of the ordinary gutta-percha solution or in a 10 per cent. ether solution. It is best to apply the chrysarobin at night, and to advise the patient to put on an old stocking, to prevent soiling the bed clothing. Application once a day in this way seems ordinarily to be sufficient, but in obstinate cases it should be applied both night and morning.

Action of Caffeine in Cardiac and Renal Disease.—Sjenetz *(Vratch*, Vol. XX., No. 14. *Int. Med. Mag.*, Aug., 1899) made some very important observations on the action of caffeine. Being at first skeptical as to its harmlessness in the usual doses employed, he finally convinced himself of its decidedly poisonous nature. The three cases reported by him are very instructive.

The author has administered this alkaloid in doses of 0.2 to 0.3 gramme two or three times daily in cases of cardio-renal affection and noticed the following results: On the day following the administration the arterial pressure markedly increased, the pulse became full but not changed in frequency, the amount of urine gradually increased, the dropsy diminishing but slightly. In five to six days the patients began to complain of tightness in the chest, shortness of breath, restlessness at night, and general aggravation of the disease. On percussion, the heart was found notably smaller. As soon as these symptoms appeared the administration was discontinued, and the blood pressure at once commenced to decline, the excretion of urine decreased, the pulse became soft, the patient feeling much better. The analysis of the urine, however, showed the presence of caffeine for many days (ten to fifteen), thus proving the cumulative action of the drug. Again, the author has noticed that the elimination of the caffeine is much slower when the kidneys are affected, and it is therefore contra-indicated in renal affections.

Carbonic-Acid Gas in Heart Disease.—W. Ewart *(Med. Record*, September 9, 1899) says that mitral stenosis and pain are greatly relieved by the inhalation of carbonic-acid gas for thirty seconds, the patient's bowels to be kept very free and the use of cardiac tonics to be restricted. There is not only a relief of pain, but greater freedom of respiration, with an improved state of the pulse and the appearance generally. Carbonic-acid gas acts as an anæsthetic, and also as a stimulus to the muscles of respiration, and a continued use of the inhalations has the effect of gradually removing the dilatation. By the ordinary treatment it is difficult to influence mitral stenosis, but carbonic-acid gas has always improved and often restored the patient to a condition of comfort.

The Use of Suprarenal Capsule in the Nose and Throat.—J. Clarence Sharp says *(Jrnl. A. M. A.)* "For a long time we have been on the lookout for some astringent besides cocaine that will contract the nasal mucous membrane without any danger or ill effect to the patient, and at the same time can be given into the hands of the patient for use at home. This, I think, we have found in the suprarenal capsule."

The writer has found the aqueous extract beneficial in examining and operating on the nose, hemorrhage being greatly lessened; in relieving congestion and reducing inflammation of the pharynx and its vault; in sub-acute laryngitis, where it is of great benefit to singers; after cauterization of inferior turbinates, and in acute amygdalitis, to relieve congestion and soreness. In hay fever we can at least feel assured that it will contract the mucous membrane as much as cocaine, without the dangerous and depressing effects of the latter.

He concludes: "In all acute inflammation of the nasal mucous membrane I like the effect very much better than that of cocaine. I have found that the best result is to be had when the solution is applied directly to the mucous membrane and not sprayed.

"After operations always clean off the surface and again apply the solution, which prevents the oozing until the crust has time to form.

"I use a 10 per cent. aqueous extract and make up a small quantity at a time, as it decomposes very quickly. I have been using the solution every day for nearly a year, and am greatly charmed with the results."

Ozone and Its Generation by the Static Current for Therapeutic Use.—Bleyer, in the *Medical Record* for September 9, shows a very simple and practical method of producing ozone in unlimited quantities by the static current for use in pulmonary disease.

The ozone generator consists of a glass globe having two poles within with silver points, so as to give a fine and large brush discharge. The poles project through the sides of the globe and are connected with the sides of the static machine. A hollow pipe leads from the globe to the mouthpiece. Just outside of the globe is attached to the pipe a small reservoir in which a piece of cotton is kept saturated with some essential oil, thus keeping the ozone free from any of the irritating acids of the air. He has also arranged a cabinet apparatus which will give, in combination with ozone, the actinic rays of light of a high violet, so that a patient may inhale ozone and enjoy sunshine, no matter what the weather is outside.

Dr. Bleyer considers the tincture of the chloride of iron he best drug to use in connection with ozone or the application of the galvanic current over the stomach and front of the chest wall one-half hour after the dose has been given. Upon anæmic patients this treatment is said to have grand effects in a short time.

RETROSPECTIVE DIETETICS.

Chronic Gastritis.—Dr. J. C. Morrow, of Bellevue, O., writes us as follows: I have received excellent results from the following treatment: Upon retiring, a brisk hand bath of two or three minutes' duration, water as hot as can be comfortably borne.

Flannel band extending from the epigastric to the hypogastric regions inclusive, worn day and night.

Exercise in open air as much as possible, at least once a week a walk of eight to ten miles in the country, use Indian clubs regularly and systematically, daily, 10 A. M., 3 P. M. If not convenient at this time, just before the bath at night. Use a light club, swing rapidly; better results obtained than from a heavy club swung with less rapidity.

First thirty days' diet consisting of fresh fish (black bass or white fish), plenty of good milk, stale home-made bread (no butter), and honey; if milk does not agree with patient dilute with lime water or soda water.

Meals: Dinner, 11:30 A. M. Supper, 5:30 P. M. *No breakfast.* To cleanse the stomach one half-hour before meals administer half a tumberful of ozonized water made of: One ounce of hydrozone with two quarts of water; the patient may feel a distressing and unpleasant sensation in the stomach after drinking the above, due to the decomposition (into nascent oxygen) of the ozonized water, that takes place more or less rapidly according to the amount of unhealthy mucus and degree of inflammation; this will all disappear as the condition of the stomach improves. Immediately after meals two teaspoonfuls glycozone, diluted with wine glass of water. At the expiration of thirty days change diet. Dinner, 11:30 A. M., chopped beef, fourth cut of a round steak preferable; stale home-made bread (no butter), one vegetable, no potatoes, one quart of milk. Supper, 5:30 P. M., milk, one quart, cracked wheat, Pettijohn an excellent preparation; fifteen minutes before and after eating one to two tablets of Peptenzyme. One half-hour before dinner and at bedtime one tablespoonful Trophonine. Lavage is an efficient means of cleansing the stomachal cavity. It is performed by the aid of the œsophageal tube. In order to introduce tube it is first coiled in a bowl of warm water, and it is then passed over the protruded tongue, through the isthmus of the fauces, through the pharynx into the œsophagus. The patient can facilitate its onward motion by efforts at swallowing. After it enters the œsophagus it passes easily along until it enters the stomach. The funnel is grasped in the left hand and the vessel of liquid in the right. Fill funnel and raise above the head; repeat this several times, then lower the funnel below the level of the stomach and the liquid is siphoned off into a pail at the patient's feet. Lavage affords an opportunity of cleansing the stomach of irritating substances, of treating the inflamed mucosa antiseptically. The no breakfast theory works advantageously in this treatment, as the œsophagal tube can be used in the morning before the patient goes to his daily occupation, thereby giving the stomach a period of rest under the best possible conditions before the midday meal. At the beginning of this treatment the presence of the tube may provoke vomiting. The introduction of a little fluid to remove the gastric surface from contact with the extremity of the tube will be sufficient, usually, to quiet reflex. Use small amount of fluid at first, as vomiting is easily excited, until the stomach becomes used to the measure; one-half pint will be sufficient. As treatment progresses one to two pints may be used at a time, without inconvenience. The solution should be about 110° F, two teaspoonfuls of Listerine to a quart of water; this treatment removes mucus and retained fermentative elements, hyperœmia subsides, mucous membrane is aroused to normal activity and returns to a condition of health.

Long-standing cases of uncomplicated chronic gastritis recover in six or eight months of this treatment. If your patient is a smoker, one cigar after each meal will act as a stimulant to digestion; no tobacco before dinner.

As a laxative, prunes are *par excellence*. To preserve the rich, fruity flavor, do not boil the prunes. After rinsing, cover with cold water and allow to soak over night; take the prunes out and boil the water in which they have soaked fifteen minutes; add to it the prunes and allow to simmer thirty minutes; set off to cool. No sugar is needed.

Taboo alcoholic liquors at once and forever. Ice water, iced drinks, complete abstinence from pastries, griddle cakes, fried foods, pickles, tea and coffee, Carbo-hydrate, should be generally avoided. A person afflicted with chronic gastritis should live carefully and abstemiously throughout his life, as it is not a difficult matter to provoke a return of the disease.

"Avoid in youth luxurious diet,
Restrain the passions' lawless riot;
Devoted to domestic quiet,
Be wisely gay;
So shall ye, spite of age's fiat,
Resist decay."

The Question of Gruels in the Feeding of Infants.—This is discussed by Chapin in the *Medical Record* of August 5, 1899. He believes that besides attenuating the casein, the addition of gruel to cow's milk increases the nutritive value of the food. This is of great service in that class of cases in which bottle-fed babies show stationary or losing weight. The food for such infants may be properly prepared as far as percentages are concerned, and yet they do not thrive. A proper addition of gruel to milk will not unfrequently check wasting. The large proportion of lactose, a carbohydrate, in woman's milk, shows the desirability of this food principle to the growing baby. The rapid production and easy dissipation of animal heat in the very young, with active tissue metabolism, indicate the call for some of the carbohydrate series.

Various observers have called attention to the favorable effect of carbohydrates in tending to preventing the putrefaction of proteids in the bowel.

The writer has tried all kinds of infant feeding with the hardest class of cases, bottle-fed babies in hospital and dispensary practice. By adding gruels to the milk, the best results are obtained with these babies. The infant is not so apt to vomit thick curds, and the tendency to a stationary or losing weight is often lessened. Jacobi and Heubner, with their wide clinical experience, both maintain that even very young infants thrive better when cow's milk

is diluted with gruels than when a mere sugar solution is added.

While large quantities of starch should be withheld in infancy, even the youngest baby can tolerate and digest a small and proper amount.

Diet in Chronic Interstitial Nephritis.—As regards the dietary of chronic interstitial nephritis, R. G. Floyd *(Med. Mirror,* Aug., 1899) considers it necessary to restrict the amount of lean meat consumed. The flesh of the larger animals—beef, mutton, and pork—must be taken with strict moderation or avoided; white meats—as chicken and rabbits, game and birds—are less harmful. Fish is an excellent form of food. Shell-fish of all kinds is good. Persons with Bright's disease will do well to learn to eat fat. They should use cream, eat plenty of butter on their bread, should have melted butter on their fish, and plenty of oil on their salads. A milk diet often gives good results.

The following list may, as a rule, be used, but should be changed to suit the individual case:

Fish: Raw oysters, raw clams, fresh fish.

Meats: Sweetbreads, mutton, bacon, chicken, salads, game. Meats to be used sparingly.

Bread and farinaceous articles: Stale bread, hominy, wheaten grits, rice, toasts, oatmeal, gruels.

Vegetables: Spinach, summer-cabbage, turnip-tops, water-cresses, lettuce, mushrooms, celery, green vegetables generally.

Desserts: Rice and milk puddings, fruits which are not very acid, unless there are digestive disturbances; baked apples, prunes. All laxative fruits.

Drinks: Spring-water abundantly, hot water, milk, skimmed milk, buttermilk.

Diet in Gout.—According to P. C. Remondino *(Pac. Med. Jrnl.,* Aug., 1899), light beers, light wines and even dry champagne, when partaken of judiciously and in moderation, are the very opposite of injurious in gout. Disease statistics show that among the Germans, who indulge habitually in small beers, as well as among the inhabitants of the Rhine and Moselle wine districts, where the average man drinks at least from one to two quarts of beer or a bottle of wine daily, gout exists at a very low ratio. Great care must, however, be taken that only light, dry wines be used. It is through alcoholizing with alcohols of doubtful sources and greatly varying in their effects upon man that much harm results, as the process is not always performed with alcohol made from wine that is pressed from the grape. Carefully-collected statistics made in France show that consumers of spirituous liquors distilled from the grape largely escape the dire effects of hereditary influences resulting from alcoholic over-indulgence, in comparison with those who use alcoholic liquors produced by distillation from pears, potatoes, or rice.

Three Cases of Acute Leukæmia. (By Drs. Gilbert and Weil, Paris, France.)—Since Ebstein, in 1889, and Fraenkel, in 1894, published contributions to our knowledge of acute leukæmia, numerous German and English articles on this subject have appeared, in which more than sixty cases have been described. In the French literature only one case, that of Apert, has been noted. The writers have used three cases which they have observed to obtain a better understanding of this interesting but often misunderstood disease. It is more frequently observed in men than in women. Age appears to play no part, for the disease is met with in old persons as well as in the new born, most frequently, however, between the eleventh and the thirtieth years. It seems to start up during the course of an infectious disease, as influenza, syphilis or tonsillitis, or during pregnancy or after severe anæmia, though it may also affect those in complete health. Characteristic of the disease is its short course. The three cases lasted two weeks, six weeks and three months respectively, which corresponds with the average given by other writers.

The clinical picture is such that without special knowledge or particular attention directed to it, one would not be able to diagnose it. The sudden beginning and the rapid course differentiate it from chronic leukæmia, with which it has many symptoms in common. The examination of the blood is alone decisive.

As to the initial symptoms, the disease may begin with chills, pains in the side of the chest, headache, fever; at other times with hemorrhages and symptoms which depend upon the rapidly increasing anæmia. Opposed to the characteristic lymph-gland enlargements of the chronic form they are but little noticeable, though the lymph-glandular system is affected. The cervical glands are most frequently palpably swollen, the spleen is always enlarged, but, as a rule, only a few fingers' breadth to be felt under the curvature of the ribs. Metastases, on the contrary, are more often observed than in chronic anæmia; they may be found in all organs, and impress upon the disease its peculiar stamp. There is nearly always a gingivitis of that side of the gum looking toward the cheek, associated with hemorrhages. Hemorrhages are met with during the whole course of the disease; most often they are noticed in the mucous membrane of the mouth, or they give rise to epistaxis, and by being situated in the skin they may be confused with scurvy and infectious purpura. The buccal involvement also may lead one to diagnose an infectious stomatitis. These hemorrhages may also be found in all the organs. The temperature is, in general, elevated, without any typical fever curve. The urine contains albumin, and, besides, the excretion of uric acid is increased two to eight grammes per diem.

A diagnosis may only be made by examination of the blood. It was Fraenkel who described the characteristic findings which are pathognomic of this disease. There is an intense and progressive anæmia, hyperleucytos is of a specific kind, and the number of red blood corpuscles is diminished even to one million; the hæmaglobin is also decreased; the hæmatoblasts disappear. Giant forms and poikilocytes appear, and pigmented as well as nucleated red corpuscles are noted. The number of white corpuscles is more or less increased, for in acute leukæmia one has to deal with a lympho-cytæmia. The number of mononuclear cells is augmented, while the polynuclear decrease in number, and the eosinophile cells are normal or lessened in number. Leucocytes, with neutrophile or basophile granula, are not found at all. As to the etiology, it appears to be of infectious origin. Though a number of micro-organisms have been found in the blood and different organs by various observers, as well as by the writers, their cultures and inoculations have been negative.

Auto-Intoxication in Its Relations to the Diseases of the Nervous System.—Dr. Daniel R. Brower *(Jour. Am. Med. Assoc.,* March 12, 1898) summarizes his conclusions on the above subject as follows:

1. Some of the nervous diseases are the product of auto-intoxication.
2. This autotoxis produces a parenchymatous degeneration of the nervous system, acute or chronic, that may result in the destruction of the structure and function of the nerve cells. (Van Giesen and Andriesen.)
3. The peculiar arrangement of the lymph channels on the nervous system makes auto-intoxication of the brain possible by the blocking of these channels.
4. The principal factor in this autotoxis is a disordered gastro-intestinal tract.
5. Gastrectasis, intestinal dyspepsia and coprostasis are ordinary conditions producing gastro-intestinal intoxication.
6. The diagnosis is to be made; *A*, by a regional examination; *B*, by examination of the gastric contents, and *C*, by examination of the urine.
7. The urines will show increased amounts of indican, diminished total sulphates, and an increase in the amount of ethereal or conjugate sulphates.
8. There will also be found, usually in consequence of this autotoxis, a diminished hemoglobin record and a diminished number of red blood corpuscles.
9. The treatment should consist of lavage, enteroclysis, gastric and intestinal antiseptics, laxatives and hematinics.

Yellow Palms as a Sign of Typhoid Fever.—Filipowicz *(Ctrlblatt. f. Die Med. Wissenschaften,* 1898, No. 11; *Amer. Jrnl. of the Med. Sciences,* October, 1898) calls attention to a symptom of typhoid fever not generally looked for. The palms and soles acquire a yellow color, which is more marked in proportion as the skin is thickened by toil, but present even when the skin is thin. This change comes on in the early days of the disease, and lasts until the end, disappearing in convalescence. The author thinks the sign due to the change in the circulation, especially to anæmia of the skin, as the result of which the sub-cutaneous fat shows through.

MISCELLANY.

—Perhaps the largest patient ever received at Bellevue Hospital was a trombone player, thirty-four years of age and weighing 400 pounds, who was taken there on September 2, suffering from hemiplegia. It required eight men to lift him from the ambulance, and in the ward to which he was taken two cots were lashed together and especially braced to sustain the man's weight.

—A question has arisen as to the sanity of Lombroso, the criminologist, on account of an article of his in the *Pall Mall Gazette*, entitled "An Epidemic of Kissing in America." He tells of Hobson's 10,000 kisses, of their publicity, and of how he was at the time addressing "a crowd of specially élite persons." Lombroso states that Hobson began his career of kissing at Vassar College, etc., etc.

—A patient was exhibited at the recent German National Dental Congress, whose entire upper jaw had been removed and replaced by an artificial contrivance, the work of Privatdocent Jessen, of Strasburg, and the dentist Hahl, with alveolar process and teeth, the two halves connected with springs. It was worn without inconvenience and enabled the patient to speak. Before it was applied articulation was impossible.

—The evils of overwork have claimed, in the case of school children, the attention of the Swiss officials. In the Canton of Luzerne the provision is that no lessons shall be studied at home, and that only moderate tasks be required in the secondary schools. Ten minute recesses every half hour are called for, and a week's vacation every six or seven weeks. Attendance at school is not to begin before the age of seven years.

—The Senatus Academicus of Clark University, Worcester, Mass., which is about to commemorate the anniversary of its foundation, has invited Professor Angelo Mosso, the eminent Italian physiologist and man of letters, to deliver a lecture on a subject specially chosen for the occasion and dealing with a scientific problem of present and universal interest. Professor Mosso has chosen for his subject "The Psychic Process and Movement."

—The new White Star steamship *Oceanic*, the largest vessel in the world, which recently made her maiden trip across the Atlantic, was thrown open for inspection for one day, at a charge of 50 cents, the proceeds being devoted to hospitals in New York. A similar arrangement was carried out in Liverpool before sailing, for the benefit of local charities, and the public interest in the big vessel resulted in the realization of a considerable sum.

—According to *L'Echo Médical* of July 2, 1899, Marguerite Boyenval, the celebrated sleeping woman at Thenelles, France, recently entered her seventeenth year of continuous slumber, the most curious case of lethargy ever scientifically observed. Now thirty-five years of age, her pallor and emaciation are extreme, although the pulse-beat is over 80. The skin is without sensation, and the arm, if lifted, remains in the air. The only nourishment is by occasional rectal injection.

—For cleaning the hands, Forbes recommends a contrivance consisting of three ounces of curled horse hair rolled up into a flat oval mass. He claims that this thoroughly cleanses the skin by rubbing, and is itself easily cleansed with boiling water before and after each surgical operation. Kept in alcohol, it is ready for use in the hospital or elsewhere. He calls it a Job, for, like the patriarch of old, having passed through all the tests, its vitality and integrity remain unimpaired.

—A law recently passed by the Michigan Legislature, according to the *Medical Record*, forbids the marriage of any person suffering from gonorrhœa or syphilis, and provides that anyone so diseased who may marry shall be guilty of a felony punishable by a fine not less than $500 or more than $1,000, or imprisonment in the penitentiary for a term not exceeding five years, or by both fine and imprisonment. A wife or husband may testify against her or his guilty spouse, and the privilege of medical secrecy is also abrogated in such cases.

—After all the outcry against it, that bastard compromise, the new English Vaccination Act, seems to be working well in practice. In Ipswich, where the average number of vaccinations for several years past has been thirty-three per quarter, 198 had been performed in the January quarter of the present year. And these again, as at Oldham, included the families of several hardened "anti" offenders, and even children for whom an exemption had been taken out only a few weeks before. Truly, the "bête humaine" can be easier led than driven.

—Newspaper reports have it that insanity is increasing in Kansas faster than in neighboring States, and Dr. Albert S. Ashmead thinks this is certainly the case. The *Tribune*, endeavoring to account for it, reminds us that Kansas was settled by enthusiasts in a time of political excitement, "and it might easily be possible that a large sprinkling of fanatics in the foundation of a community subject to the hardships and loneliness common to all the surrounding country would leave traces in the character of the population half a century later."

—It is announced that at the Sykesville (Md.) Asylum for the Insane, as a result of the open door plan inaugurated by the late Dr. George H. Rohe, and which has been in successful operation for more than a year, no patient during that period has been mechanically restrained or subjected to cell confinement within the walls of the institution. By the beginning of the year it is expected that the new department for women will be ready to receive its 200 inmates, who are to be exclusively under the charge of female physicians and female attendants.

—They do lynching scientifically out in Falls City, Neb. A man there, on August 22, criminally assaulted a little girl, and was quickly arrested and placed in jail; not, however, before a crowd of would-be avengers had tried and failed to get the prisoner away from the officers. Along in the small hours of the morning, several hundred men got together, marched to the jail, broke in the doors, and one of the number—"perhaps a physician," the newspapers have it—"performed a surgical operation which will prevent the prisoner from committing any more such crimes."

—A writer in *Medical Advance* says that it fell to his lot, several years ago, to handle considerable quantities of American ginseng, the root of *panax quinquefolium*, one of the highest priced drugs in the world. Five or six men of the neighborhood were frequent visitors to the laboratory and got into the habit of nibling pieces of the root. Whether or not by a mere coincidence, certain it is that the wives of four of these had twins during the succeeding nine or twelve months. This, perhaps, shows how Professor Schenk's sex-determining method may be doubled in efficacy.

—The following testimony was recently given by a woman at the anniversary services of faith-cure believers, which was held at Mount Zion Sanctuary in Chapel avenue, Greenville, N. J.: "This man, when young, spilled some acid in his eyes and destroyed the sight of both. The physician removed his eyeballs and he was totally blind for many years. He was finally persuaded to pray for the restoration of his sight. Shortly afterward he felt something growing in the places where his eyeballs had been. New eyes were given to him, and to-day he can see as clearly as any person here." We are now waiting for a raising from the dead.

—According to the *Journal of the American Medical Association*, while every effort is being made in this country to raise the standard preliminary to a medical education, the French have lowered theirs, and by a recent decree are to admit graduates from the so-called "modern" course—chemistry, physics and natural history—and no longer exact the diploma of the "classic" course—letters and philosophy. A similar movement has been agitated in Germany, but is frowned on in official circles, which even refuse to accept the classic diplomas of the Swiss universities, on account of the fact that Greek is optional and may be substituted by a modern language.

—A recent book on the native tribes of Central Australia says that they have no notion that mankind is propagated by the union of sexes, and steadfastly reject the idea when suggested to them. Their theory on the subject is that scattered places all over the country are haunted by the spirits of their remote ancestors, who are constantly looking out for a favorable opportunity of being born again into the world. When one of them sees his chance he pounces out on a passing girl or woman and enters into her. Then she conceives and in due time gives birth to a child. Thus, in the opinion of these savages, every conception of a human being is what we are wont to call an immaculate conception.

INDEX FOR VOLUME XXVII.

1899.

INDEX TO VOLUME XXVII.

1899.

A

	PAGE
Abortion, early management of	161
Abortion, production of, by nitrate of silver	63
Abscess, pelvic	75
Acclimatization, new theory of	190
Acne, diet in	318
ADAMS, DR. J. H. Newer Therapeutic Notes	266
ADAMS, DR. J. H. Relapses in Typhoid Fever	108
ADAMS, DR. J. H. Treatment of Incipient Phthisis at Home	228
ADOLPHUS, DR. J. Resorcin, Gonorrhœa, etc.	265
Adulteration of food	318
Afterbirth, sold his	238
Air temperature, the best	302
Alcohol, absolute, to keep	288
Alcohol an antidote for carbolic acid poisoning	224
Alcohol, food value of	222
ALLEN, DR. C. W. Clinic on Diseases of the Skin	154
ALTMAN, DR. J. T. Ulcer of the Stomach	8
Aluminum for obtaining very high temperatures	320
Amenorrhœa, Chinese remedy for	317
Angina pectoris, oxygen as a remedy for	93
Anæmia, the common nettle in	222
Anæsthesia, the danger point in	31
Antidote, the best general	352
Aphonia, hoarseness, etc., bichromate of potassium in	128
Apoplexy, a study of habits of life and constitution leading to	230
Appendicitis, diagnosis of	324
Appendicitis letter, Dr. Terry's	220
Appendicitis maxims	238
Appendicitis, medical treatment of	251
Appendicitis, modus operandi in	269
Appendicitis, necessity of making an early diagnosis of	38
Appendicitis. Dr. Terry's reply to Dr. Morris in reference to the ten cases asked for	157
Appendicitis statistics	28, 93
Appendicitis, surgical statistics of	126
Appendicitis, the hernia guarantee and the minimum of confinement after operations for	170
Armstrong, Katherine. A Case of Paternal Impression	61
Arterial ligation, subcutaneous	16
Arterio-sclerosis — Its dietetic treatment	190
Artificial foods, the place of, in infant dietetics	318
Asepsis, medical	255
Ataxia, locomotor, the modern treatment of	62
Auricular nerve, posterior, the influence of	251

B

Baby food, an inexpensive	189
Bacteriology as a fad	283
Bailey, Dr. W. O. Treatment of Mycosis	90
Baillet, Dr. The Different Forms of Uræmic Paralysis	169
Baldness, treatment of, by simple aseptic irritation	252
Banana flour	317
Barclay, Dr. H. V. Treatment of Chronic Heart Diseases by Baths and Exercises	72
Beer in tablets	285
BENEDICT, DR. A. L. Blood Examination	321
Beriberi, the prophylaxis of	319
BIBLIOGRAPHICAL:	
American Pocket Medical Dictionary	343
An American Text-Book of Diseases of the Eye, Ear, Nose and Throat	119
Andres, James M. A Text Book of the Practice of Medicine	375
Annual and Analytical Cyclopædia of Practical Medicine	51, 181
Archives of the Roentgen Ray	246, 343
Arndt, H. R. A Practice of Medicine	247
A Treatise on Surgery	344
Attfield, John. Chemistry, General, Medical, and Pharmaceutical, Including the Chemistry of the United States Pharmacopœia	246
Barker, Lewellys F. The Nervous System and Its Constituent Neurones	344
Barry, William. The Two Standards	181
Bianchi, Aurelio. The Phonendoscope and Its Practical Application	23
Bishop, Seth Scott. Diseases of the Ear, Nose and Throat, and Their Accessory Cavities	215
Boericke, William, and William A. Dewey. The Twelve Tissue Remedies of Schuessler	215
Bradford, Thomas Lindsley. History of Hahnemann College and Hospital of Philadelphia	23
Brubaker, Albert P. A Compend of Human Physiology	88
Butler, George Frank. A Text Book of Materia Medica, Therapeutics and Pharmacology	375
Burr, C. B. A Primer of Psychology and Mental Disease	23
Chapman, Henry C. Treatise on Human Physiology	245
Church, Archibald, and Frederick Peterson. Nervous and Mental Diseases	246
Crile, George W. An Experimental Research Into Surgical Shock	119
Crook, James K. The Mineral Waters of the United States, and Their Therapeutic Uses	246
Cushny, Arthur R. A Text-Book of Pharmacology and Therapeutics, or the Action of Drugs in Health and Disease	310
Cyclopædia of the Diseases of Children, Medical and Surgical	245
Deaver, John B. A Treatise on Human Anatomy in Its Application to the Practice of Medicine and Surgery	374
Donders, F. C. An Essay on the Nature and Consequences of Errors of Refraction	247
Dudley, E. C. Diseases of Women	215
Dwight, Henrietta Latham. The Golden Age Cook Book	51
Edgren, J. G. Kliniska Studier oefver Arterioskleros	246
Fuchs, Ernest. Text-Book of Ophthalmology	214
Ellingwood, Finley. A Systematic Treatise on Materia Medica and Therapeutics, with Reference to the Most Direct Action of Drugs	50
Garsset, J. Leçons de Clinique Médicale	87
Gerrish, Frederick Henry. A Text-Book of Anatomy	214
Gowers, W. R. Legione Clinicke Sulle Malattie del Sistema Nervoss	88
Grafstrom, Dr. Mechano-Therapy	51

PAGE

Grandin, Egbert. A Text-Book on Practical Obstetrics 151
Haab, O. Atlas of the External Diseases of the Eye 151
Haggard, H. Rider. Dr. Therne 22
Hall, Winfield S. A Text-Book of Physiology 343
Hare, Hobart Amory. Medical Complications, Accidents and Sequelæ of Typhoid or Enteric Fever 344
Hare, Hobart Amory. Practical Diagnosis 277
Hare, Hobart Amory. The Medical Complications, Accidents and Sequelæ of Typhoid or Enteric Fever 211
Hein, Ludwig. Lehrbuch der Bacteriologie 151
Hirt, Ludwig. The Diseases of the Nervous System 215
Hollopeter, W. C. Hay Fever and Its Successful Treatment 277
Huber, John H. Christian Science 119
Hughes, Daniel E. A Compend of the Practice of Medicine..... 343
Human Anatomy 23
Hurst, Barton Cooke. A Text-Book of Obstetrics. 23
Imbriaco, P. Le Operatione Piu Frequente nella Chirurgia di Guerra.. 309
International Clinics...215, 277, 375
Jackson, George Thomas. Ready Reference Hand-Book of Diseases of the Skin 119
Jones, Stacy. Bee-Line Therapia and Repertory. 374
Kartulis. Dysenterie (Ruhr) 309
Knopf, S. A. Pulmonary Tuberculosis 277, 374
Landis. Quiz Compends No. 5—Obstetrics 22
Maydl, Carl. Ueber Subphrenische Abscesse 246
Merack, Franz. Atlas of Diseases of the Skin.... 214
Moore, Benjamin. Elementary Physiology 119
New York Charities Directory 51
Ohlemann, F. W. Max. Ocular Therapeutics 246
Park, Roswell. An Epitome of the History of Medicine 247
Progressive Medicine, 51, 181, 277, 344
Pryor, William R. The Treatment of Pelvic Inflammation Through the Vagina 344
Purdy, Charles W. Practical Urinalysis and Urinary Diagnosis 23
Purrington, W. A. A Review of Recent Legal Decisions Affecting Physicians, Dentists, Druggists and the Public Health.. 215
Rankin, Egbert Guernsey. A Digest of External Therapeutics, with Numerous Formulæ Arranged for Reference ... 309

PAGE

Reed, Thomas E. Cyclic Law 22
Robinson, Byron. The Abdominal Brain and Automatic Visceral Ganglia... 374
Rockwood, Elbert W. A Laboratory Manual of Physiological Chemistry. 345
Saunders' Pocket Medical Formulary 50
Schweinitz, G. E. de. Diseases of the Eye 50
Scott, James Foster. The Sexual Instinct 23
Seitz, Carl. Grundriss Der Kinderheilkunde 87
Self-Examinations for Medical Students 215
Sexual, Victor G. The Pathology and Treatment of Sexual Impotence..... 151
Skene, Alexander J. C. Electro-Hemostosis in Operative Surgery 277
Smith, E. Franklin. Anatomy, Physiology and Hygiene 51
Stenzel, Alfred. A Text-Book of Pathology..... 23
Stewart, G. N. A Manual of Physiology, with Practical Exercises 50
Stimson, Lewis A. A Treatise on Fractures and Dislocations 88
Storey, Emily A. M. Practical Materia Medica for Nurses 181
System of Diseases of the Eye. By American, British, Dutch, French, German and Spanish Authors 375
Talbot, Eugene S. Degeneracy 23
The American Year Book of Medicine and Surgery 97
The Archives of Pediatrics 22
The International Medical Annual and Practitioner's Index 151
The International Text-Book of Surgery 278
The Medical News Visiting List for 1900..... 375
The Newer Remedies..... 215
The Practice of Obstetrics, by American Authors... 51
The Physician's Visiting List for 1900..... 374
Thomson, St. Clair. The Cerebro-Spinal Fluid: Its Spontaneous Escape from the Nose 344
Tuttle, George M. Diseases of Children..... 343
Twentieth Century Practice 51
Von Leyden, E. Handbuch der Ernaerungstherapie und Diatetik ... 152
Walter, Robert. Vital Science Based Upon Life's Great Law, the Analogue of Gravitation 343
Weir, Jr., James. The Psychical Correlation of Religious Emotion and Sexual Desire 23
Wells, William H. A Compend of Gynæcology..... 343
Wharton, Henry R. Minor Surgery and Bandaging. 343

PAGE

Young, A. G. Notes on Disinfectants and Disinfection 22
Fifth Annual Report on Births, Marriages, Divorces and Deaths in the State of Maine 22
Ninth Annual Report of the State Commissioners of Lunacy for 1896-7.... 22
Tenth Report of the State Board of Health of the State of Maine 22
Birds, surgery among 80
Bladder, the, a means of emptying 80
Bleyer, Dr. J. M. On the Phenomenon of Electricity and Life 360
Blood examinations..... 321
Brodnax, Dr. B. H. A New Way to Make Fluid Extracts 231
Brodnax, Dr. B. H. On State Examining Boards.. 316
Bronchitis and bronchial asthma, heroin in 95
Brubaker, Dr. J. G. Cerebro-spingal meningitis..... 297
Brubaker, Dr. J. G. Treatment of scarlet fever with antisepsis 76
Bureau, Dr. Sudden Death in Fatty Heart..... 367
Birlimia, soda-water for..... 350
Burns, how they kill and how to treat them 285

C

Caille, Dr. A. Medical Clinic on Diseases of Children... 218
Campbell, Dr. O. B. Pelvic Abscess 75
Cameron, Dr. M. Treatment of Chronic Ulcers 172
Cancer, calcium carbide in... 93
Cancer, pyoktannin in 104
Cancer, treatment of, by cataphoresis and by organotherapy 348
Carbolic acid, magnesia sulphate an antidote to 96
Carbolic acid poisoning, alcohol for 64
Carbuncle, painless treatment of 187
Cardiac disease, morphine in. 221
Cartledge, Dr. A. M. Gall Stones 55
Carbuncle, urethal, treatment of 161
Case, how to take the—hysteria, and its treatment—Cirrhosis of liver 185
Catarrh, chronic nasal 191
Catherizing women, the proper method of 28
Catheters and cystitis..... 63
Cerebro-spinal fever (epidemic cerebro-spinal meningitis of Stillé) report on the recent appearance of, in Chicago, 1898 33
Chalybeate medication, modern 24
Chancres, soft, treatment of, by means of steam..... 348
Chase, Dr. R. G. Rheumatic Fever and Its Treatment.. 70

PAGE

Children, medical clinic on diseases of, at the Post-Graduate School and Hospital 57
Children, medical clinic on diseases of 218
China, a doctor's fee in..... 309
Chloroform narcosis, resuscitation in apparent death during 302
Chloroform, use of, in rooms illuminated by gas 80
Chlorosis, treatment of, by hot baths 253
Chocolate, a valuable dietetic and therapeutic agent 189
Cholera, locust, in South America 46
Chorea, a study of the etiology and treatment of... 332
Christian Science 302
Christian Science at Needham, Mass. 314
Chronic diseases, diet in.... 351
CLASS, DR. W. J. Report on the Recent Appearance of Cerebro-Spinal Fever (Epidemic Cerebro-Spinal Meningitis of Stillé) in Chicago, 1898 33
Clinical—German Hospital. Malignant growth of pylorus; double pyosalpinx; radical cure of hernia; appendiceal abscess..... 219
Clinical lecture, Pennsylvania Hospital 310
Clinical Lecture, Woman's Hospital, Philadelphia..... 375
Clinical Lecture, Frederick J. Leviseur..... 378
Clinics, interesting cases from the 122
Cocain and eucain 317
Cod-liver oil as a nutrient.. 319
Cold, to abort a..... 221
Colic, painter's, normal saline solution in 94
Constipation, creosote in 222
Constipation, infantile, massage in 188
Constipation produced by oatmeal 318
Consumption, house-air 133
Consumption, is it of vegetable origin? 206
COOLEY, DR. H. S. Case of Tetanus Treated by Intra-Cranial Injections of Antitoxin Serum 300
Country doctor, the, in the practice of medicine 4
CREEL, DR. M. P. Treatment of Recurrent Attacks of Spasmodic Croup 290
Croup, spasmodic, nitroglycerine in 94
Croup, spasmodic, treatment of recurrent attacks of..... 290
Cycling and action of the Heart 269

D

DEAVER, DR. J. B. Clinical—German Hospital. Malignant Growth of Pylorus; Double Pyosalpinx; Radical Cure of Hernia; Appendiceal Abscess 219

PAGE

DEAVER, DR. J. B. Replacement of Retroverted Uterus—Pyloric Obstruction with Misleading Symptoms—Percentage of Mortality in Operations for Appendicitis 59
Delirium tremens in moderate consumers of alcohol 236
Delirium tremens in moderate drinkers, with report of four cases 205
DERCUM, DR. F. X. Clinical Illustrative Cases of Hysteria, With Points on the Treatment of This Disease 45
Diabetes, carbuncles in 74
Diarrhœa, summer, of infants, diet in 95
Dietetics, retrospective, 31, 62, 95, 189, 222, 253, 285, 317, 351, 382
Diet reform, a new fad in.... 190
Diets, mixed, the effects of, on salivary digestion 63
Digitalis, contra-indications to the use of 120
Diphtheria, blood treatment in 316
Diphtheria, calcium sulphide in 160
Diphtheria, laryngeal, apomorphin after injection of antitoxin for 256
Diphtheria, local treatment of 188
Diphtheria of the eye, antitoxin in 93
Diphtheria, treatment of, by intravenous injections of antitoxin 352
Diseased conditions of the human system and their conservative treatment 201
Disinfectant, pocket..... 351
Disinfection of sleeping rooms, corrosive sublimate in the 159
Doctor of ophthalmology ... 217
Doctors in the role of drug habitues 380
Ducking stool, the 109
Dysentery, physiological treatment for 314
Dyspepsia, Cooks on..... 31

E

Ear disease, middle, in general practice 137
Eclampsia, puerperal 232
Eclampsia, puerperal, veratrum viride in 284
EDEBOHLS, DR. G. M. The Hernia Guarantee, and the Minimum of Confinement After Operations for Appendicitis 170
EDITORIAL:
Abuse of the Piano 211
A Delightful Climate 85
A Fraud 146
A Giant Magnet 244
Advancing or Retrograding, Which 370
Aid to Diagnosis of Cancer of the Stomach 149
A Lesson Soon Forgotten. 173
Alcohol and Insanity 274
American Institute of Homœopathy 210
American Medical Association 303

PAGE

An American Carlsbad 149
Anæsthesia 180
Anæsthesia in Obstetrics.. 213
A New Coffee 83
A New Hospital 117
A New Index Medicus.... 341
A New Ovary 212
A New Tonic 211
A New Training School for Nurses 181
An Excellent Idea 86
An Honor Conferred 241
Annual Meetings of Medical Associations in June. 176
Appendicular Liver 180
Are Our Charitable and Reformatory Institutions Conducted in a Christian Spirit? 271
Army Cooking Schools.... 179
A Severe Penalty 242
A Step Into the Invisible World 145
A Victim to His Own Prejudice 22
A Tardy Tribute 308
Beef Blood as a Vitalizing Agent in Disease 180
Bichromate of Potassium.. 150
Books as Carriers of Consumption 342
Boric Acid 149
Bottini's Operation 49
Bubonic Plague 309
Cancer 342
Carbolic Acid in Tetanus.. 212
Carbolic Acid: Phenic Acid 117
Chemically Pure Water .. 117
Christian Science 339
Climate and Skin Disease. 212
Climate in the Philippines 274
Clinical Lectures on Skin Diseases 341
Conservative Uterine Surgery 118
Contracted Pelvis in American Women 341
Crotalus in Bubonic Plague 275
Cuba Under the Stars and Stripes 176
Decreasing Fatality of Disease 340
Dispensary Act 339
Divorce 339
Dispensary Law 178
Dr. Alfred Stillé 214
Dr. E. M. Hale 84
Dr. George H. Simmons... 87
Dr. Horace M. Paine..... 119
Dr. Mosso on American Physique 342
Dr. Nicholas Senn 176
Efficacy of Medicines Increased by Dilution 181
English Honors for Americans 181
Enzym 273
External Application of Nutrients 149
Facts to be Considered in the Re-organization of the Medical Department of the Army and Navy.. 82
Faith Curists and Christian Scientists 178
Fewer Medical Students .. 117
Foreign Versus Home Clinical Studies 83
Fruit-Juices vs. Beef Blood 244
Glaucoma Cured by Massage 180
Government Sanitarium for Consumptives 147

PAGE

Hospitals for Working Women 177
Hygiene of the Barber Shop 148
Hypnotism as a Legal Defense 340
Ichthyol in Whooping Cough 373
Increase of Cancer 49
Increase of Insanity..... 277
Indian Poisons 113
Instrumental Measurement of Fatigue and Pain.... 177
Inter-State Reciprocity, 276, 342
Kissengen and Vichy Waters in Obesity..... 50
Kumiss 83
Legislation or Evolution?.. 276
Life in the Tropics 179
Liquefied Air 275
Lord and Lady Curzon.... 118
Magnetism and Immortality 19
Malaria 21
Martyrs for Science 113
Matteawan State Hospital..308
Medicine and Literature... 373
Medical Department of the National Guard 49
Memorial to Dr. O'Dwyer. 150
Menthol Acetate Solution in Vomiting After Anæsthesia 177
Menu 211
Methylene Blue in Epithelioma 85
Microbic Purification of Sewage 86
Modified Smallpox Inoculation 213
Nagging 372
Name Center 340
Nasal Origin of Nervous Prostration 213
Nineteenth International Medical Congress 309
Nitroglycerine: Glonoine.. 114
Nosophene in Chancroid and Ulcerative Syphilitic Lesions 22
Not the Place for Party Politics 241
Nutrition of the Nerve Cells 369
Osteopathy 22
Oxaluria—Its Clinical Significance 244
Pharmacopeia Revision 341
Photographing the Stomach 307
Premature Burial 86
Professor or Doctor?..... 240
Professor Saranelli as a Bacteriologist 305
Pure Beer 85
Quinine in Malaria 115
Reciprocity in State Medical Examinations 118
Report of State Board of Medical Examiners 118
Revival of the Whipping Post 178
Salicylate of Soda in Diabetes 373
Seeking the Secret of Malaria 276
Somatopathy 86
State Hospital for Consumptives 47
State Medical Examining Board 210
Sterility 86
Surgery for Dyspepsia 20
Taking Temperature by Sound 21
Tartar Emetic in Variola. 116

PAGE

Telepathy 239
The Brown Bread Fad.... 48
The Bubonic Plague...245, 342
The Bubonic Plague Not Contagious 242
The Centenary of Nitrous Oxide as an Anæsthetic. 179
The Code in New York... 307
The Death-Rate in the Spanish War 48
The Dispensary Bill 150
The Duty of the Hour.... 17
The Early Diagnosis of Malignant Uterine Disease 116
The Equality of the Sexes in the Development of the Human Race 272
The Ergograph 114
The Female Form in Art.. 150
The Food Scandal 85
The Future of the Human Alimentary Canal 148
The Governor of Santiago. 81
The Health of Havana.... 243
The Homœopathic Medical Society of Germantown. 50
The Hospitals and Dispensaries of New York 308
The Hour When Death Is Nearest 49
The Kissing Bug 245
The Land of the Pigmies.. 116
The Latest Miracle of Science 147
The Leper Colony of Molokai Island 242
The Leprosy Conference.. 174
The Lessons of the Hour. 337
The Menace of Hazing..... 371
The Modern Murder of the Innocents 84
The New Dispensary Law. 307
The New Medical Curriculum at Harvard..... 306
The New Pacific..... 371
The New York Homœopathic Medical College and Somatopathy 118
The Porcelain Painter's Son 50
The Pulse as a Sign of Neurasthenia 213
The Revelations of the X-Ray Not Always Reliable 372
The Science of Medicine and its Relation to the People 338
The Study of British Military Medical Methods .. 21
The Surgical Treatment of Perforation of the Bowel in Typhoid Fever..... 373
The Secret of Old Age.... 140
The True Antidote for Christian Science 245
The Victoria Cross 305
The Woman's Medical College of New York Infirmary for Women and Children 214
Tinnitus Aurium 50
Tuberculosis Congress 208
Twentieth Century Practice 215
Virchow on America 214
Ward's Island and Metropolitan Hospital 18
Whortleberry in Eczema... 277
Yellow Fever 207, 274
Egg, the white vs. the yolk of, as a food..... 317
Eggs, concerning 223

PAGE

Eggs, hen's, in infant feeding 254
Eldridge, Dr. A. G. The Fœtal Development of Man.. 287
Electricity and life, on the phenomena of 360
Electricity as a rejuvenator.. 253
Ellis, Dr. A. G. Etiology, Symptomatology and Treatment of Exophthalmic Goitre 294
Ellis, Dr. A. G. Importance of Salicylic Acid over the Salicylates in the Treatment of Acute Articular Rheumatism 168
Ellis, Dr. A. G. Notes on Interesting Hospital Cases. 249
Ellis, Dr. A. G. The Modern Treatment of Croupous Pneumonia 91
Elmergreen, Dr. R. Delirium Tremens in Moderate Drinkers, with Report of Four Cases 205
Empyema, surgical treatment of, including phlebotomy of lung 14
Entero-lithiasis, with report of cases 10
Epilepsy, ipecacuanha in a case of 188
Epilepsy, the beneficial effects of amyl nitrite in..... 120
Erysipelas 163
Erysipelas, abortive treatment of 159
Eucain-B as a local anæsthetic 317
Examining boards, State.... 313
Extracts, fluid, a new way to make 221

F

Fairchild, Dr. P. H. Some Considerations in the Treatment of the Diseases of Women 29
Family physician, the passing of the 3
Feeble digestion, ipecac in .. 284
Female, the, points in the treatment of various conditions in 161
Fermentation of stomach, fluoride of ammonium in.. 64
Fœtal development, the, of man 287
Fibroid, uterine, with ovarian cyst 45
Fig coffee 285
Fitch, Dr. M. E. The Methods of Pediatric Investigation 142
Fitch, Dr. M. E. Pleural Effusions and Their Management 330
Food diseases 351
Fracture in aged persons.... 54
Fracture, 6,000 cases of, treated by Bardenheuer's extension 46
French Medical Societies, 26, 52, 89, 125, 152, 183, 216, 247, 278, 313, 345
Fritts, Dr. J. H. Occlusion of Posterior Nares, with Report of Two Cases..... 36

G

Gall stones 55
Gangrene 134

PAGE

GASSER, DR. H. The Circulation of the Nervous System 65, 100, 129
GASSER, DR. H. The Physics of the Circulation in the Nervous System 289
GASSER, DR. H. Theory of the Circulation in the Nervous System and Its Relation to Insanity..... 357
Germany, letter from..... 187
Gibbes' correction, Dr. 349
Goitre, exophthalmic, etiology, symptomatology and treatment of 294
Goitre, exophthalmic, the use of the glycero-phosphates in 110
GORTON, DR. D. A. The Two Standards 181
Gout, strawberries and 285
Grippe, desquamative 93
GUPTILL, DR. G. H. Diseased Conditions of the Human System and Their Conservative Treatment .. 201

H

HARDIN, DR. C. B. A Want of Type in Disease Inhibits Medical Progress 260
HARRIMAN, DR. A. H. Middle Ear Disease in General Practice 137
HARRINGTON, DR. G. S. Artificial Feeding of Infants .. 198
HARRIS, DR. R. C. Points in the Management of Various Conditions in the Female. 1. Treatment of Simple Urethritis in the Female. 2. Management of Early Abortion.—3. Treatment of Urethal Caruncle 161
Headache, diagnosis and treatment of 257
Healthy bodies and healthy brains, the interdependence of 31
Heart disease, calomel in 284
Heart diseases, chronic, treatment of, by baths and exercises 72
Heart, fatty, sudden death in 367
HEIDNER, DR. G. A. Medical Treatment of Varicose Ulcers 166
HELM, DR. E. C. The Passing of the Family Physician 3
Hemorrhage, post partum, new device for the arrest of 188
Hemorrhoids, gallnut for.... 351
Hernia, some late ideas regarding the cure of..... 292
Hernia, strangulated, taxis in 80
Hernia, the bicycle in cases of 302
Heroin, experience with 283
HILLS, DR. A. K. Retrospective Therapeutics, 30, 62, 93, 187, 221, 252, 283, 316, 349, 381
Holocaine, a note on 188
HONAN, DR. W. F. Pyoktannin in Cancer 104
Hospital cases, interesting notes on 249
Hospital notes 279
Hospitals, practical notes from the 88
Hot air bath, the..... 188
Hot air treatment 253

PAGE

Hydrozone and glycozone... 316
Hysteria, clinical illustrative cases of, with points on the treatment of this disease... 45

I

Infants, artificial feeding of. 198
Inflammation 63
Intestinal obstruction, with report of five cases..... 139
Intravenous injection, nourishment by 190

J

JELKS, DR. J. L. Prostatic Irritability and Enlargement—A Sequence of the Hemorrhoidal State 13
Jena Society of Naturalists and Physicians 182
JOHNSON, DR. A. B. Surgical Clinic at Roosevelt Hospital 155
JOHNSON, DR. G. R. Some Late Ideas Regarding the Cure of Hernia 292
JOHNSON, GUY R. What a Physician Should Know About the Law 132
Joints, diseases of the..... 42

K

Kinetoscope, the, in clinical instruction 127

L

Labor, chloroform externally during 188
Law, what a physician should know about the 132
LEAVITT, DR. S. Obstetric Version 262
LEE, DR. E. A Study of Habits of Life and Constitution Leading to Apoplexy 230
LE PLONGEON, DR. A. Yellow Fever, Its Treatment 193
Leprosy, is it curable?..... —
Leucorrhœa, essential, movement cure for 350
LEWIS, DR. W. C. Management of the Convalescence of Typhoid Fever 164
Lithemia and gout, meat in. 63
Lithiasis, biliary, phosphate of soda in, for 32
Lithia water, Buffalo, therapeutic properties of 287
Lockjaw, gelsemium a cure for 96
LONGYEAR, DR. H. W. Medical Treatment of Puerperal Infection, with Special Reference to Serum Therapy. 353
Louisville Clinical Society .. 54
Lung, the peculiar structure of 128
Lungs, fuel gases and the.... 78
Lupus, potassium permanganate in 222

M

Malarial fever, hemorrhagic. 12
Malarial fever, the hypodermic use of quinine in 59
Malaria, mosquitoes and 80

PAGE

Malt soup in the feeding of infants 286
MATTISON, DR. A. S. Puerperal Eclampsia 232
McBurney, Dr. C. Surgical Clinic at Roosevelt Hospital 121
Measles and scarlet fever, differential diagnosis of .. 320
Meigs, Dr. A. V. Clinical Lecture, Pennsylvania Hospital 310
Meningitis, cerebro-spinal .. 297
Meningitis, cerebro-spinal, Crede's soluble silver in... 95
Meningitis, Kernig's sign of 63
Mental element in therapeutics 350
MERIWETHER, DR. F. T. The Diagnosis of Appendicitis. 324
Metals, colloidal, therapeutic use of 316
Metritis, chronic, zinc chloride in 159
Milk, absorption without digestion of 189
Milk albumen a cheap food.. 285
Milk, condensation and preservation of, by refrigeration 351
Milk, raw cow's, for infant feeding 238
Milk, sterilized, disadvantages of 189
Milk, to render it digestible. 318
MILLER, DR. M. R. Use of the Glycero-Phosphates in Exophthalmic Goitre 110
MILLS, DR. W. S. How to Take the Case—Hysteria and Its Treatment—Cirrhosis of the Liver..... 185
Mineral springs, fictitious ... 222
Miscellany, 32, 64, 96, 128, 160, 192, 224, 256, 288, 320, 352, 384
Mistle thrush swallowing droppings of young 222
MITCHELL, DR. C. Detection of Small Quantities of Albumin in Urine..... 326
Moles, to remove, without the knife 64
MOODY, DR. F. J. Hemorrhagic Malarial Fever..... 12
MORGAN, DR. W. F. Desquamative Grippe 93
MORGAN, DR. W. F. Uterine Fibroid with Ovarian Cyst. 45
MORRIS, DR. R. T. Appendicitis Statistics 28, 93
MORRIS, DR. R. T. Dr. Terry's Appendicitis Letter.... 221
MORRIS, DR. R. T. Modus Operandi in Appendicits.. 269
MUCKLOW, DR. A. S. Modern Chalybeate Medication. 24
Mycosis, treatment of..... 90

N

Nails, the surgical cleansing of 288
Nature, therapy of 94
Nausea and vomiting after anæsthesia, to control..... 16
NEATHERY, DR. E. J. Entero-Lithiasis, with Report of Case 10
Nephritis, parenchymatous, sambucus in 252
Nervous system, the circulation of 65, 100, 129

PAGE

Nervous system, the physics of the circulation in..... 289
Nervous system, theory of the circulation in, and its relation to insanity..... 357
Neurasthenia, with special reference to the best mode of treatment 80
NEWTON, DR. L. R. Intestinal Obstruction, with Report of Five Cases 139
New York Post-Graduate Medical School and Hospital, medical clinic at..... 56
New York Society for the Relief of Widows and Orphans of Medical Men.... 186
Nostalgia and depression.... 92
Nurse's knowledge, a..... 238

O

OBITUARY:
Hoyne, Temple S., M. D., of Chicago 95
Ludlam, Reuben, M. D., of Chicago 191
Obstetric version 262
Occlusion of posterior nares, with report of two cases.. 36
Odors, diagnostic value of, in medicine 319
Oil, olive, dietetic uses of... 95
Onions, medicinal properties of 318
Opium habit, the, sodium bromide a cure for..... 352
Orchitis, old double, permeability of vasa deferentia in 90
OSTROM, DR. H. I. Limitations of Conservative Surgery of the Uterine Appendages 233
OSTROM, DR. H. I. Necessity of Making an Early Diagnosis of Appendicitis 38
Ozena, treatment of, with citric acid 284

P

PAGE, DR. C. E. Christian Science at Needham, Mass. Physiological Treatment for Dysentery 314
PAGE, DR. C. E. Cold as a Cause of Pneumonia..... 6
PAGE, DR. C. E. The Present War on Tuberculosis; Water Will Not Run Up Hill 60
Paralysis agitans, treatment of 286
Paralysis, uræmic, the different forms of 169
PARKER, DR. W. T. Is the Term Putrid Infection Scientific? 9
Paternal impression, a case of 61
PATTERSON, DR. J. C. Diagnosis and Treatment of Headache 257
Peanuts and alcohol..... 32
Pediatric investigation, methods of 142
Pelvic circulation, the..... 366
Pericardial diseases illustrated clinically 97
Petroleum as a laxative..... 352

PAGE

Petroleum emulsions, nutritive value of 318
Pharmacopœia revision..... 380
Philosophy, bit of 270
Phthisis, incipient, climate-cure in the treatment of... 225
Phthisis, incipient, treatment of, at home..... 228
Physiotherapeutics and balneology 28
Pleural effusions and their management 330
Pneumonia, cold as a cause of 6
Pneumonia, croupous, hot water treatment of..... 284
Pneumonia, croupous, modern treatment of 91
Pregnancy, diet during, as a preventive of dystocia and for the determination of sex 253
Pregnancy, nursing during.. 112
Pre-operative feeding 189
Prickly heat, treatment of.. 349
PRITCHARD, DR. F. H. Delirium Tremens in Moderate Consumers of Alcohol. 236
PRITCHARD, DR. F. H. Semiological Value of Purpuric Eruptions in Blood Diseases 264
Prolapsus, anal, ice in..... 222
Prostatic irritability and enlargement—A Sequence of the Hemorrhoidal State... 13
Prostatorrhœa, treatment of, by prostatic substance 317
Protonuclein in general practice 30
Puerperal fever, case of, treated with unguentum crede 223
Puerperal infection, medical treatment of, with special reference to serum therapy 353
PUGH, DR. T. J. Subcutaneous Arterial Ligation..... 16
Purification of potable wafers with peroxid of chlorine.. 317
Purpuric eruptions, semeiological value of, in blood diseases 264
Putrid infection, is the term scientific? 91
Pyemia 203

R

Rachitis, treatment of..... 318
Rectal medication in infancy 351
Resinol, prescription that duplicates 352
Resorcin, gonorrhœa, etc..... 265
Rheumatic fever and its treatment 70
Rheumatic fever, recent ideas regarding local treatment and the use of the salicylates in 334
Rheumatism, acute articular, cold by ice-bags in 252
Rheumatism, acute articular, importance of salicyclic acid over the salicylates in the treatment of..... 168
Rheumatism, arthritic, milk diet in 62
Rheumatism, ichthyol externally in 316

PAGE

Rheumatism in children..... 187
Rigid perineum, mixture for. 288
Ringworm of scalp treated with sodium chloride..... 188
ROBINSON, DR. B. The Pelvic Circulation 366
Roosevelt Hospital, surgical clinic at.....121, 155

S

Saccharin, use of, in nourishing infants 63
Salt water, rectal instead of intravenous injections of.. 255
Sarcoma of the nose..... 54
SARLES, DR. W. T. The Country Doctor in the Practice of Medicine..... 4
SATTERTHWAITE, DR. T. E. Pericardial Diseases Illustrated Clinically 97
Scarlet fever, treatment of, with antisepsis 76
School physicians 63
Science, the, falsely called Christian 283
Sea voyages, choice between, from the standpoint of therapy 286
Sepsis, prevention of, by soluble silver 95
Septicemia, puerperal, chlorrate of potash for..... 96
Serum treatment with serum from human convalescents 350
Sex, error of, as a ground for divorce 319
SHEARER, DR. T. W. Surgical Treatment of Empyema, including Phlebotomy of Lung 14
Sheet rub, the..... 221
Signatures and similia 61
Skin, clinic on diseases of the 154
SMITH, DR. E. F. Diseases of Joints 42
SMITH, DR. E. F. Erysipelas 163
SMITH, DR. E. F. Gangrene. 134
SMITH, DR. E. F. Inflammation 63
SMITH, DR. E. F. Pyemia.. 203
SMITH, DR. E. F. Ulcer and Ulceration 111
SMITH, DR. L. J. A Study of the Etiology and Treatment of Chorea 332
Solanum carolinense, therapeutic uses of 94
SOMMER, DR. H. O. Letter from Germany 187
Sprains, electrical massage for 224
Stammering cured by a bullet wound 256
Standardization needed 254
Sterility, belladonna in 30
Strychnine, lard an antidote for 191
Sugar, the use of, after severe muscular exercise..... 285
Summer comfort and health. 191
Surgery among birds..... 127
Surgical cases, diet for..... 285
SWAYZE, DR. G. B. H. Fuel Gases and the Lungs..... 78
SWAYZE, DR. G. B. H. House-air Consumption ... 133
Syphilis, congenital, hemorrhage a sign of..... 350

PAGE
Syphilis, painful dysphagia evidence of 31
Syphilis, tertiary, acid nitrate of mercury for the chronic ulcers of 320

T

Taylor, Dr. H. R. Climate-cure in the Treatment of Incipient Phthisis 225
Terrors, night, in children, cured by music..... 286
Terry, Dr. M. O. Appendicitis Maxims 238
Terry, Dr. M. O. Medical Treatment of Appendicitis. 251
Terry, Dr. M. O. Reply to Dr. Robert T. Morris in Reference to the Ten Cases Asked for 157
Terry, Dr. M. O. Surgical Statistics of Appendicitis.. 126
Tetanus, case of, treated by intracranial injections of antitoxin serum 300
Therapeutic notes, newer, 126, 216
Therapeutics, retrospective, 30, 62, 93, 187, 221, 252, 283, 316, 349, 381
Tobacco, on the use of..... 347
Trachoma, etiology of..... 238
Traction, pain relieved by.... 252
Tribromphenol-bismuth 94
Tropin: A maximum of nutrition at a minimum cost. 253
Tuberculosis and its treatment, recent views in regard to 363
Tuberculosis, pulmonary, report of 78 cases of, treated with watery extract of tubercle bacilli 319
Tuberculosis, the present war on; water will not run up hill 60
Type in disease, want of, inhibits medical progress.... 260
Typhoid fever, diet in..... 351
Typhoid fever, management of the convalescence of.... 164
Typhoid fever, oculo-motor paralysis from, with case.. 191
Typhoid fever, relapses in... 108
Typhoid fever, solid food in. 254

U

Ulcer and ulceration..... 111
Ulcer, gastric, treatment of. 88
Ulcer of the stomach..... 8
Ulcers, chronic, treatment of 172
Ulcers, varicose, medical treatment of 166
Urethral disorders, staphisagria in 62
Urethritis, simple, in the female, treatment of..... 161
Urine, detection of small quantities of albumin in.... 326
Urine, the, as a diagnostic factor 336
Urotropin 30, 316
U. S. vital statistics, twelfth census of the..... 336
Uterine appendages, limitations of conservative surgery of 233
Uterus, retroverted, replacement of—Pyloric obstruction with misleading symtoms—Percentage of mortality in operation for appendicitis 59

V

Vaccination sores, to heal... 349
Vaccination without a cicatrix 336
Vaccinia, alleged discovery of the bacillus of 96
Vasogen, in practice 284
Vegetable diet, therapeutic indications of 254
Vegetables, green, and levo-rotatory sugars, the value of 190
Volta centenary, the 172
Vomiting, incoercible, of pregnancy, massage in 94
Vomiting of pregnancy..... 319
Vomiting, persistent, cold water to allay 284

W

Wall-paper, arsenical poisons in 256
Water closets on trains, dangers from 286
Water, pure, poisonous properties of 255
Whooping-cough, citric acid in 95
Whooping-cough, formalin in 252
Whooping-cough, thymol in.. 222
Widal's test, value of, in typhoid fever, as illustrated in a series of obscure cases. 25
Williams, Dr. C. Recent Views in Regard to Tuberculosis and Its Treatment. 363
Wilson, Dr. R. W. Recent Ideas Regarding Local Treatment and the Use of the Salicylates in Rheumatic Fever 334
Women, diseases of, some considerations in the treatment of 29
Worms, intestinal, diagnosis of, without examining the stools 336
Wound treatment, the Crede silver method of 191
Wrinkles, lanolin for 32

X

Xeroform in army surgery.. 222

Y

Yellow fever: Its treatment.. 193

Medical Times

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ORIGINAL ARTICLES.

The Medical Treatment of Puerperal Infection, with Especial Reference to Serum Therapy. By Howard W. Longyear, M.D. 353

The Theory of the Circulation in the Nervous System and Its Relation to Insanity. By Herman Gasser M.D.. 357

On the Phenomena of Electricity and Life. By J. Mount Bleyer, M. D., P. R. A. M. S., LL.D..... 360

Recent Views in Regard to Tuberculosis and Its Treatment. By Charles Williams, M.D 363

The Pelvic Circulation. By Byron Robinson, M.D..... 366

Sudden Death in Fatty Heart. By Dr. Bureau..... 367

EDITORIALS.

NUTRITION OF THE NERVE CELLS..... 369

ADVANCING OR RETROGRADING, WHICH? 370

THE NEW PACIFIC..... 371

THE MENACE OF HAZING 371

NAGGING..... 372

THE REVELATIONS OE THE X RAY NOT ALWAYS RELIABLE..... 373

SALICYLATE OF SODA IN DIABETES.... 373

ICHTHYOL IN WHOOPING COUGH..... 373

THE SURGICAL TREATMENT OF PERFORATION OF THE BOWEL IN TYPHOID FEVER..... 373

MEDICINE AND LITERATURE..... 373

BIBLIOGRAPHICAL.

Deaver's Surgical Anatomy—The Physician's Visiting List for 1900—Pulmonary Tuberculosis—Bee-Line Therapia and Repertory—The Abdominal Brain and Automatic Visceral Ganglia..... 374

A Text Book of the Practice of Medicine—The Medical News Visiting List for 1900—System of Diseases of the Eye—A Text Book of Materia Medica—International Clinics..... 375

HOSPITAL REPORTS.

Clinical Lecture, delivered at Woman's Hospital, Philadelphia..... 375

Clinical Lecture. By Frederick J. Levi-seur, M.D..... 378

CORRESPONDENCE.

Pharmacopœia Revision..... 380

Doctors in the Role of Drug Habitues.. 380

Translations, Cleanings, Etc.

Retrospective Therapeutics..... 381

Retrospective Dietetics..... 382

MISCELLANY..... 384

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Xeroform is the ideal substitute for iodoform, being an antiseptic, desiccating, and deodorizing agent which is odorless, non-poisonous, and non-irritating, with very powerful antibacterial properties. Xeroform has been employed by Drs. Heuss, Cumston, Grünfeld, Beyer, Metall, Paschkis, and many other observers, in the most varied surgical affections ; for operative procedures, amputations, enucleations, and cancer operations; for suppurative bursitis, lymphadenitis, and alveolar periostitis; for paronychias, deep abscesses and suppurating buboes. In venereal diseases it has been extensively employed in the treatment of chancroid; and in dermatology for impetigo, furunculosis, sycosis, eczema, and pruritus. It has also been successfully used in ophthalmic and gynæcological practice, and for insufflation into the nose and ear. Its fine pulverization enables the physician to cover a large surface with a very small quantity of the drug.

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When internal Hemorrhoids have attracted the attention of the patient, they have usually progressed further in development than external Hemorrhoids and the physician is called upon to employ mild palliative or curative treatment, or radical operative procedures according to the requirements of any general case.

Palliative treatment in early cases sometimes becomes curative treatment. Dr. Carpenter reports some fifty cases of piles treated with Glyco-Thymoline (Kress), diluted with an equal portion of water. Two teaspoonfuls or more of this mixture are injected into the rectum with a small glass or hard rubber syringe, two or three times a day. The results obtained from this treatment were invariably satisfactory, giving immediate relief to the patient.

Glyco-Thymoline (Kress) causes rapid exosmosis of serum from the engorged tissues; it is perfectly bland and devoid of irritating qualities and being antiseptic it is particularly advantageous in cases in which abrasion or erosion of mucosa exists, making the employment of an antiseptic desirable.

One or two tablespoonfuls of Glyco-Thymoline (Kress) diluted one-half with water injected into the rectum at a time when the patient wishes to move the bowels, will give beneficial results.

GLYCO-THYMOLINE

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at once stops the bleeding, allays the pain, itching and discomfort.

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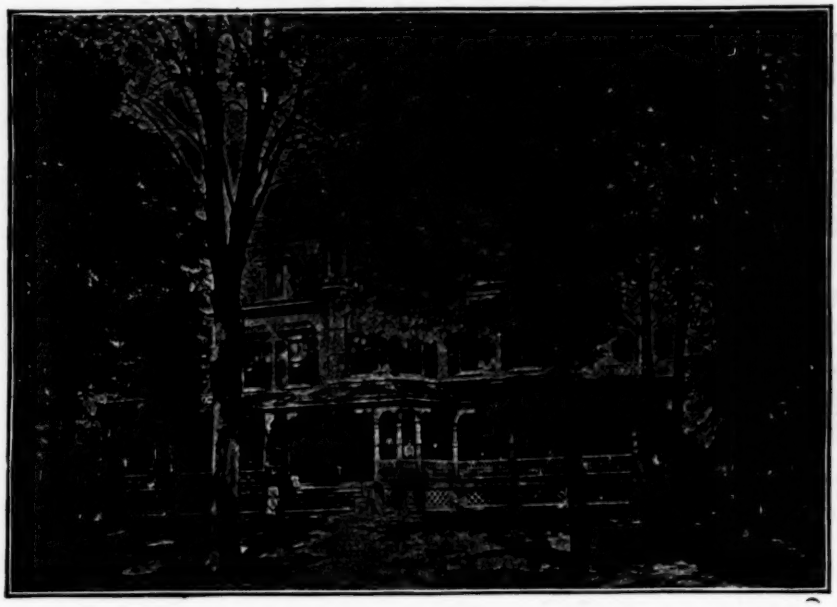

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BOVININE is Bovine Blood Unaltered from the Arteries of the Bullock;
The Universal Auxiliary of Modern Medicine and Surgery,
and the TRUE "ANTITOXIN" of Healthy Nature.

In the more enlightened progress of Modern Medicine, "Blood-letting" has given place to Blood-*getting*.

Aye! Get Good Blood—but How? Not by the Alimentary Process. It has already failed to do its work (else the patient would not be sick); and in acute disease must not even be allowed to do the work it can. Stimulate as you will, the whole sum of the patient's alimentary power when fully forced into play, is unable to keep up the nourishing and supporting contents of the blood. There is absolutely but one thing to do; and, thank God, that can be done, usually with success, as ten-thousand-fold experience has proved. That one thing is this: where Nature fails to PRODUCE good and sufficient Blood, WE CAN INTRODUCE IT from the arteries of the sturdy bullock, by the medium of BOVININE.

The vital activity of this living blood conserve rests on no man's assertion: it speaks for itself, to every properly equipped physician who will test its properties microscopically, physically, or therapeutically.

TRY IT IN PRACTICE.

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Try it in ***Dyspepsia*** or Malnutrition of young or old, and watch the recuperation of the paralysed alimentary powers.

Try it in ***Intestinal*** or gastric irritation, inflammation, or ulceration, that inhibits food itself, and witness the nourishing, supporting and healing work done entirely by absorption, without the slightest functional labor or irritation; even in the most delicate and critical conditions, such as Typhoid Fever and other dangerous gastro-intestinal diseases, Cholera Infantum, Marasmus, Diarrhœa, Dysentery, etc.

Try it per rectum, when the stomach is entirely unavailable or inadequate.

Try it by ***subcutaneous*** injection, when collapse calls for instantaneous blood supply—so much better than blood-*dilution!*

Try it on ***Chronic Ulceration,*** in connection with your antiseptic and stimulating treatment (which affords no nourishment) and prove the certainty and power of topical blood nutrition, abolishing pus, stench, and PAIN, and healing with magical rapidity and *finality.*

Try it in ***Chronic Catarrhal*** Diseases; spraying it on the diseased surfaces, with immediate addition of peroxide of hydrogen; wash off instantly the decomposed exudation, scabs and dead tissue with antiseptic solution (Thiersch's); and then see how the mucous membrane stripped open and clean, will absorb nutrition, vitality and health from intermediate applications of pure bovinine.

Try it on the ***Diphtheritic Membrane*** itself, by the same process; so keeping the parts clean and unobstructed, washing away the poison, and meanwhile sustaining the strength independently of the impaired alimentary process and of exhaustive stimulants.

Try it on ***anything,*** except plethora or unreduced inflammation; but first take time to regulate the secretions and functions.

Try it on the ***patient*** tentatively at first, to see how much and how often, and in what medium, it will prove most acceptable—in water, milk, coffee, wine, grape, lemon or lime juice, broth, etc. A few cases may even have to begin by drops in crushed ice.

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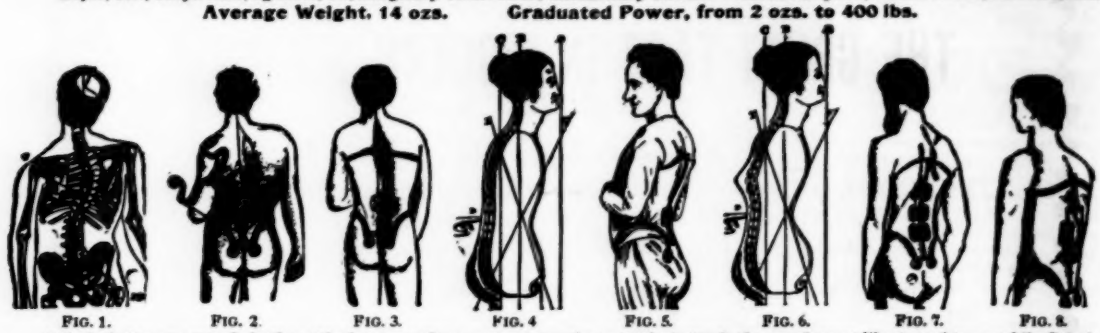

FIG. 1. FIG. 2. FIG. 3. FIG. 4 FIG. 5. FIG. 6. FIG. 7. FIG. 8.

"And whatever we may do in these spinal cases, nothing must compromise or put in jeopardy the very largest liberty and power of the Spinal, Abdominal and Pectoral Muscles."—BANNING.

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Figs. 1, 2, 3 **In Bilateral or Rotary Curvature** reverses the force of the body's weight to the opposite side at each point of curvature is the true philosophy of cure.—BANNING.

Figs. 4, 5, 6, 7, 8. **In Simple Drooping, Spinal Irritation and Antero Posterior Curvature,** to lift the weight of head and shoulders from the tender spinal points, and by pushing forward the dorso lumbar curve transfer pressure to central portions of bodies of vertebræ, **is the sheet anchor of hope.**—BANNING.

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Royal Baking Powder vesiculates the dough by mechanical means, without fermentation, and in no way affects or changes the constituents of the flour. There is no destruction of the gluten or sugar, but all those elements are preserved which are intended by nature, when combined in our bread, to make it literally "the staff of life."

Fresh bread, cake, biscuit, griddle-cakes, etc., raised with Royal Baking Powder, may be eaten with impunity by persons of dyspeptic tendencies or the most sensitive stomachs.

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NOTE—Cheap and imitation baking powders are recommended and their sale pushed by certain grocers because of the greater profit in them. These imitation powders almost invariably are made of alum. Alum costs but two cents a pound, while cream of tartar costs over thirty cents. It is employed simply because it is cheap, but every physician knows that the use of this corrosive poison in food is at the cost of health. Think of nursing mothers, delicate girls and sickly children being fed on food made with alum!

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Another Physician from New York State writes:

"My report on ESKAY'S FOOD is short: I have never used anything better, and I tried it after almost everything else failed, and always met with success."

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SELECTIONS.

On October 23 an imposing memorial was erected in Vienna to the memory of Dr. Mueller, who lost his life in the laboratory plague epidemic in that city.

Hoveloch, a celebrated French author, in his "Science of Language," gives us the origin of the word "cadaver," so common to all medical students, in the following manner: It is derived from three words, *ca-io, da-ta, ver-mibus,* meaning "a body given to worms."

Military authorities in England, it is said, have at last decided to make a change in the footwear of the British infantry soldier.. The army shoe is constructed to wear well, but little attention is paid to comfort or convenience. This is to be altered, and a shoe that combines comfort with endurance is to be supplied.

Dr. Charles Vishno says: "I had a case of caries of the metatarsus and phalanges of the left side of the foot in a man eighty-nine years old. The progress of the disease was very obstinate, going on to the commencement of gangrene in spite of the best of nursing and efforts of treatment. Council was called to consider the advisability of amputation; but our conclusion was that the patient was too old and feeble to undergo that procedure. I then determined on a trial of blood treatment, using BOVININE as an external application and also internally. There seemed to be a change for the better in a very short time, and after extracting a portion of the phalanges of the little toe, the improvement went on steadily to a complete recovery. The man is now ninety-one, and has no further trouble with the foot and can wear any shoe that he likes."

"In 1897, I had a case of a boy of fifteen with the worst form of scrotal abscess, bordering on gangrene, from an injury. I have attended a large number of similar cases during my thirty years of practice; but this was the most difficult to treat of them all. The best results were obtained from the topical application of the bovine blood."

The religious sect known as the "Anointed Saints," in the vicinity of Marengo and Milltown, Ind., according to the lay press, still continues to defy the health authorities in refusing to secure burial permits. Six deaths have occurred in which medical assistance has been declined, and thirty-five cases of typhoid fever are said to exist within a radius of a few miles.

The plague in now officially declared present in Oporto, Portugal, and in Mauritius forty cases, with thirty-two deaths, occurred during the week preceding the report, Reports from Alexandria, Egypt, August 13, show that after a week's interval one fatal case occurred on August 10, and three new cases and two deaths during the week ending August 13. In Hongkong the number of new cases during the week ending August 14 was twenty, with twenty-three deaths.

The Food Value of Malt and the Digestive Value of the Enzyme Diastase. (Edwin Rosenthal, M. D., *American Gynaecological and Obstetrical Journal* for October, 1899).—It is a well established clinical fact that malt preparations are of therapeutic value just in proportion as they possess the ability to convert starches—one of the most important food stuffs, about two-thirds of the ordinary diet—into assimilable products. The writer, after studying the unbiased reports of analytical chemists concerning the nutritive values—as revealed by chemical examinations—and the diastasic power of the best known malt preparations, selected MALTZYME and its various compounds as being theoretically the best adapted nutrient and digestive adjuvant. The MALTZYME preparations were given a fair, unbiased clinical trial in about thirty cases. One of the striking features concerning MALTZYME was the freedom from the disadvantages which render malt administration disagreeable to delicate patients. The MALTZYME preparations are fluid, not viscid and gummy, they are free from disagreeable odor and taste, and are perfectly miscible with liquids. No complaints were noted, in the entire series of cases, that the preparations could not be taken.

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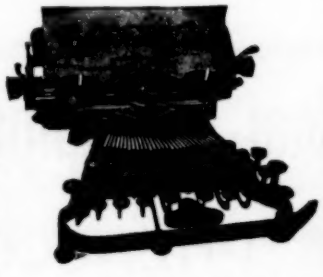

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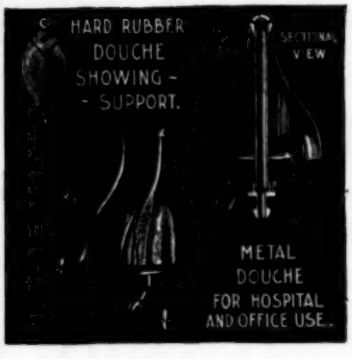

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Water or fluids may be retained as long as desirable and without leakage.

The vagina can be thoroughly and easily balooned.

Almost invaluable in treatment of Endometritis, Prolapsus Uteri, Ovaritis, Uterine Congestion and Gonorrhœa. In the treatment of the latter it shortens the period of infection at least one-half.

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Formula—Each Dose Contains: *Pure Norwegian Cod Liver Oil, 80 m. (drops), Distilled Water, 35 m. (drops), Soluble Pancreatin, 5 grains, Soda, ⅛ grain, Salicylic Acid, ¼ grain.*

DOSE.—Two teaspoonfuls alone or mixed with twice quantity of water, to be taken after each meal.

HYDROLEINE is a pancreatized Cod Liver Oil preparation of pure Norwegian Cod Liver Oil (from Lofoten), that is prepared as the direct result of a long series of physiological experiments, conducted by H. C. Bartlett, Ph. D., F. C. S., and G. Overend Drewry, M. D., M. C. R. S., and encouraged with many practical suggestions by Bence Jones and Baron Liebig.

HYDROLEINE is based on sound scientific principles; it is easily digested and assimilated, without producing eructations. Appetite is increased, and that, so far from possessing the unpleasant taste of Cod Liver Oil and its emulsions, HYDROLEINE is palatable as milk, and pleasant. The formula is well known and the preparation has received the endorsement of physicians throughout the United States. It is sought to introduce HYDROLEINE exclusively on its merits, and for that reason the profession is appealed to only through the columns of medical journals.

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MEDICAL NEWS.

THE Johns Hopkins University has just sent a scientific expedition to the Far East to study tropical diseases. Among the places visited will be Yokohama, Kobé, Shanghai, Hong-Kong, Singapore, and Colombo.

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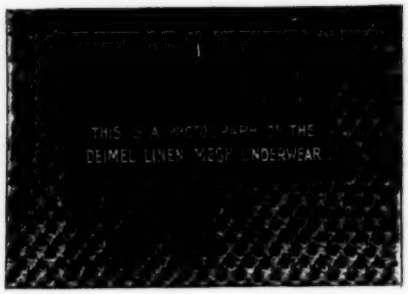

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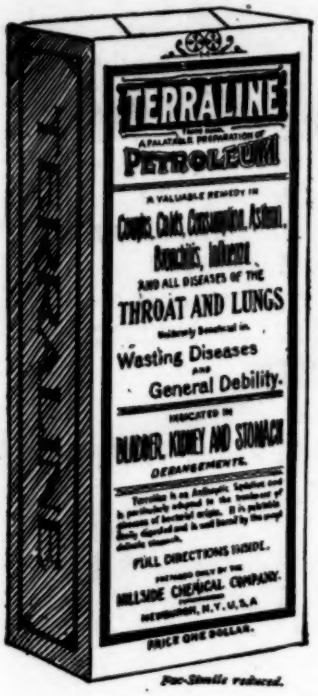

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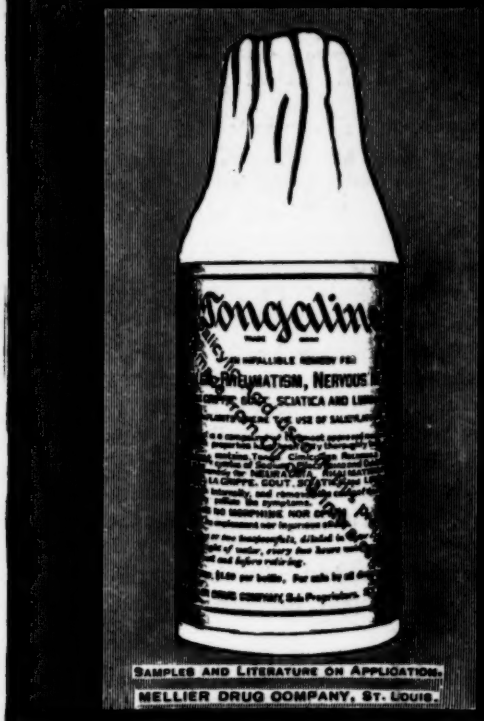

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